Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Improving Wireless Emergency Alerts and Community-Initiated Alerting	)	PS Docket No. 15-91
	)	

NOTICE OF PROPOSED RULEMAKING

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By the Commission: Chairman Wheeler, Commissioners Clyburn, Rosenworcel, Pai and O'Rielly issuing separate statements.

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I. INTRODUCTION

1. Today we take steps to strengthen Wireless Emergency Alerts (WEA) by proposing revisions to our rules based on the Commission's experience and stakeholder feedback during the first three years of the WEA's deployment. Specifically, in order to empower state and local alert originators to participate more fully in WEA,[1] and to enhance the utility of WEA as an alerting tool,[2] this *Notice of Proposed Rulemaking* (*Notice*) proposes revisions to our rules designed to improve the clarity of WEA messages, to ensure that WEA alerts reach only those individuals to whom a WEA alert is relevant, and to establish a WEA testing program that will improve the effectiveness of the system for public safety officials and the public. This *Notice* also seeks comment on issues necessary to ensure that WEA keeps pace with evolving technologies and thus empowers communities to initiate these life-saving alerts. Our proposals are tailored to impose minimum burdens on stakeholders, while ensuring "that all Americans have the capability to receive timely and accurate alerts."[3]

2. Our proposals fall into three categories: improving the effectiveness of WEA message content, improving geo-targeting,[4] and facilitating testing and proficiency training. With respect to WEA messaging, we propose to expand the maximum character length of WEA messages from 90 to 360 characters, create a new class of WEA alerts (Emergency Government Information) to provide an additional mechanism for critical communications between alert originators and their communities, and to remove our prohibition on embedded references to allow the provision of phone numbers and URLs in WEA messages.[5] We also seek comment on whether it is technically feasible to enhance the utility of WEA messages by supplementing WEA alerts with multimedia, and by providing WEA alerts in languages other than English. With respect to geo-targeting, we propose to require Participating Commercial Mobile Service (CMS) Providers to distribute WEA messages to a geographic area that more

[1] The term "alert originator" refers to a federal, state, territorial, tribal, or local entity authorized by FEMA to use the Integrated Public Alert and Warning System (IPAWS) to issue critical public alerts and warnings in emergency situations. The Federal Emergency Management Agency (FEMA) recognizes "alerting authorities," *e.g.*, federal, state, territorial, tribal, and local authorities that have completed the necessary authentication steps to use IPAWS. *See* FEMA, ALERTING AUTHORITIES, https://www.fema.gov/alerting-authorities (last visited Jun. 3, 2015).

[2] WEA was formerly known as the Commercial Mobile Alert System (CMAS). In 2013, the Public Safety and Homeland Security Bureau amended its Part 10 rules to change the name "Commercial Mobile Alert System" (CMAS) to "Wireless Emergency Alert" (WEA). *See* Commercial Mobile Alert System, PS Docket No. 07-287, *Order*, 28 FCC Rcd 1460 (PSHSB 2013). With this action we close CMAS PS Docket No. 07-287, and open a new docket, PS Docket No. 15-91, for WEA.

[3] The Commercial Mobile Alert System, PS Docket 07-287, *Third Report and Order*, 23 FCC Rcd 12561, 12562, ¶ 3 (2008) revised by Erratum (dated Sept. 5, 2008) (*Third Report and Order*).

[4] "Geo-targeting" alerts refers to the ability of the WEA architecture to direct an alert to a geographic area that matches that desired by the alert originator. *See* CSRIC IV, WORKING GROUP TWO, WIRELESS EMERGENCY ALERTS, GEO-TARGETING, MESSAGE CONTENT AND CHARACTER LIMITATION SUBCOMMITTEE, FINAL REPORT 8 (2014), *available at* https://transition.fcc.gov/pshs/advisory/csric4/CSRIC_CMAS_Geo-Target_Msg_Content_Msg_Len_Rpt_Final.pdf (last visited Jun. 9, 2015) (*CSRIC WEA Messaging Report*). The Communications Security, Reliability and Interoperability Council (CSRIC) is a federal advisory committee charged with providing recommendations to the FCC to ensure, among other things, the optimal security and reliability of communications systems, including telecommunications, media, and public safety systems, subject to the requirements of the Federal Advisory Committee Act (FACA). *See* 5 U.S.C.A. § 10. The *CSRIC WEA Messaging Report* has been endorsed by the Disability Advisory Committee (DAC). *See* Letter From Susan Mazrui, Co-Chair, Disability Advisory Committee (DAC), to Marlene H. Dortch, Secretary, FCC, PS Docket No. 15-91 (filed Jun. 25, 2015).

[5] Uniform Resource Locators (URLs) are the fundamental network identification for any resource connected to the web, and are used to specify addresses on the Internet in the following format: "protocol://hostname/other information." *See* INDIANA UNIVERSITY, KNOWLEDGE BASE, WHAT IS A URL?, https://kb.iu.edu/d/adnz (last visited May 12, 2015).

accurately matches the target area specified by the alert originator.[6] With respect to WEA testing and training, we propose to establish requirements and procedures to facilitate state and local WEA testing and proficiency training, and seek comment on logging and reporting requirements for Participating CMS Provider Alert Gateways.[7] We also seek comment on steps the Commission can take to promote participation in WEA by CMS Providers and by wireless customers. With respect to consumer participation, we seek comment on different alternatives for displaying and receiving WEA messages, in order to reduce the likelihood that consumers will "opt out" of WEA. We also address the election process by which CMS Providers choose to participate in WEA. Finally, we also ask whether we should allow transmission of the WEA Attention Signal as part of government-developed Public Safety Announcements (PSAs), whether and how testing of the broadcast-based WEA infrastructure should be implemented, and whether WEA alerts should take priority over all mobile device activity except for certain voice and data sessions.[8]

II. BACKGROUND

3. In 2008, pursuant to processes required by the Warning, Alert and Response Network (WARN) Act,[9] the Commission adopted rules allowing CMS Providers to voluntarily deliver timely and accurate emergency alerts over subscribers' mobile devices.[10] The WARN Act required that the Commission undertake a series of actions, including the establishment and convening of an advisory committee to recommend technical requirements for WEA.[11] Accordingly, the Commission formed the

[6] A "Participating CMS Provider" is a Commercial Mobile Service Provider that has voluntarily elected to transmit Alert Messages under Part 10 of the Commission's rules. 47 C.F.R. § 10.10(f). For purposes of Section 602 of the Warning, Alert and Response Network (WARN) Act, Congress specifically defined "commercial mobile service" as that found in section 332(d)(1) of the Communications Act of 1934, as amended, 47 U.S.C. § 332(d)(1) (the term "commercial mobile service" means any mobile service that is provided for profit and makes interconnected service available to the public or to such classes of eligible users as to be effectively available to a substantial portion of the public, as specified by regulation by the Commission). *See* Warning, Alert and Response Network (WARN) Act, Title VI of the Security and Accountability For Every Port Act of 2006, Pub. L. No. 109-347, 120 Stat. 1884 (2006) (WARN Act). The term "Commercial Mobile Service" (CMS) is co-extensive with the term "Commercial Mobile Radio Service" (CMRS) as defined in 47 C.F.R. § 20.3. 47 C.F.R. § 20.3.

[7] To "log" an alert is to maintain a list of alerts received and/or rejected in order to provide a mechanism to audit the provision of such alerts. *See* FEDERAL COMMUNICATIONS COMMISSION COMMERCIAL MOBILE SERVICE ALERT ADVISORY COMMITTEE, PMG-0035 COMMERCIAL MOBILE ALERT SERVICE ARCHITECTURE AND REQUIREMENTS 66 (2007) (*CMSAAC Report*).

[8] The WARN Act required the Commission to "complete a proceeding to require licensees and permittees of noncommercial educational broadcast stations or public broadcast stations (as those terms are defined in section 397(6) of the Communications Act of 1934 (47 U.S.C. 397(6))) to install necessary equipment and technologies on, or as part of, any broadcast television digital signal transmitter to enable the distribution of geographically targeted alerts by commercial mobile service providers that have elected to transmit emergency alerts under this section." *See* WARN Act § 602(c). This broadcast-based WEA infrastructure serves as a back-up to the C-Interface. *See infra* ¶ 4 (describing the C-Interface).

[9] On October 13, 2006, the President signed the Security and Accountability for Every Port (SAFE Port) Act into law. Title VI of the SAFE Port Act, also known as the WARN Act, establishes a process for the creation of a national mobile alerting system, now known as WEA, whereby Participating CMS Providers transmit emergency alerts to their subscribers.

[10] *See* 47 C.F.R. § 10; *see also* The Commercial Mobile Alert System, PS Docket No. 07-287, *First Report and Order*, 23 FCC Rcd 6144 (2008) (*First Report and Order*); The Commercial Mobile Alert System, PS Docket No. 07-287, *Second Report and Order and Further Notice of Proposed Rulemaking*, 23 FCC Rcd 10765 (2008) (*Second Report and Order*); *Third Report and Order*, 23 FCC Rcd 12561.

[11] WARN Act §§ 603(a), (d).

Commercial Mobile Service Alert Advisory Committee (CMSAAC).[12] The CMSAAC submitted its report to the Commission on October 12, 2007, as required by the WARN Act.[13] The Commission subsequently promulgated rules governing WEA, within the timeframes established by the WARN Act.[14] The WARN Act gives the Commission authority to adopt "relevant technical standards, protocols, procedures and other technical requirements based on the recommendations of such Advisory Committee necessary to enable commercial mobile service alerting capability for commercial mobile service providers that voluntarily elect to transmit emergency alerts."[15] The WARN Act also gives the Commission authority to adopt procedures whereby CMS Providers could specify their intent to the Commission to participate in WEA.[16] Many CMS Providers, including the four nationwide wireless carriers, elected to participate in WEA, at least in part.[17] Since it was deployed in April 2012,[18] WEA has been used to issue timely and accurate emergency alerts, including severe weather warnings, evacuate and shelter-in place alerts, and America's Missing: Broadcast Emergency Response (AMBER) Alerts.[19]

4. The WEA system that arose out of the WARN Act is a tool for authorized federal, state and local government entities to geographically target 90-character Presidential, Imminent Threat, and AMBER Alerts to the WEA-capable mobile devices of Participating CMS Providers' subscribers.[20] As depicted in *Figure 1* below, a WEA alert is sent by an authorized federal, state or local government entity using the Common Alerting Protocol (CAP) to the Federal Emergency Management Agency (FEMA)-operated Alert Aggregator via a secure, Internet-based interface (the A-Interface) where it is

[12] *See* Notice of Appointment of Members to the Commercial Mobile Service Alert Advisory Committee, Agenda for December 12, 2006 Meeting, *Public Notice*, 21 FCC Rcd 14175 (PSHSB 2006).

[13] *CMSAAC Report*.

[14] WARN Act § 602(a) (requiring the Commission to promulgate technical standards for WEA within 180 days of receipt of the CMSAAC's recommendations); *id.* at § 602(c) (requiring the Commission to promulgate requirements for noncommercial educational broadcast stations or public broadcast stations to enable the distribution of geographically targeted messages within 90 days of the publication of its technical standards); *id.* at § 602(b) (requiring the Commission to promulgate election procedures for CMS Providers within 120 days of the publication of its technical standards); *id.* at § 602(f) (requiring the Commission to require by regulation technical testing for commercial mobile service providers that elect to transmit emergency alerts and for the devices and equipment used by such providers for transmitting such alerts).

[15] *Id.* at § 602(a).

[16] *Id.* at § 602(b). Under the WARN Act, CMS Providers could elect to participate in whole, in part, or not at all. *Id.* at § 602(b)(1)(B) (electing to participate "in part" signifies that a Participating CMS Provider only elects to provide WEA alerts in select regions of the United States). CMS Providers who intended to participate in WEA were required to specify their intent to the Commission in writing. *See id.* at § 602(B)(2)(A) (requiring that "within 30 days after the Commission issues its order under [Section 602(b)], each licensee providing commercial mobile service shall file an election with the Commission with respect to whether or not it intends to transmit emergency alerts").

[17] *See* FCC, MASTER CMAS REGISTRY, *available at* https://www.fcc.gov/pshs/docs/services/cmas/MasterCMASRegistry.xls (last visited Oct. 21. 2015); *see also* PS Docket No. 08-146 (containing a record of all Participating CMS Providers' elections to participate in WEA).

[18] *See* FCC's Public Safety and Homeland Security Bureau Sets Timetable in Motion for Commercial Mobile Service Providers To Develop a System That Will Deliver Alerts to Mobile Devices, PS Docket No. 07-287, *Public Notice*, 24 FCC Rcd 14388 (PSHSB 2009).

[19] *See* CTIA, WIRELESS EMERGENCY ALERTS, http://www.ctia.org/your-wireless-life/consumer-tips/wireless-emergency-alerts (last visited Oct. 20, 2015). The AMBER (America's Missing: Broadcast Emergency Response) program is a nationwide alerting program designed to help bring missing children to safety. *See* Office of Justice Programs, AMBERAlert.gov, http://www.amberalert.gov/about.htm (last visited May 7, 2015).

[20] *See, e.g.*, 47 C.F.R. § 10.450 (geo-targeting); 47 C.F.R. § 10.430 (character limit); 47 C.F.R. § 10.400 (classification).

authenticated, validated and delivered to FEMA's Alert Gateway (the B-Interface).[21] At the FEMA Alert Gateway, the alert is prepared for delivery to the Participating CMS Provider by being converted to Commercial Mobile Alert for C-Interface (CMAC) format to render it readable by mobile devices. The alert is then disseminated across a secure Internet-based interface (the C-Interface) to the Participating CMS Provider's Alert Gateway (CMSP Gateway) for distribution to mobile customers over cell broadcast (CMSP Infrastructure).[22]

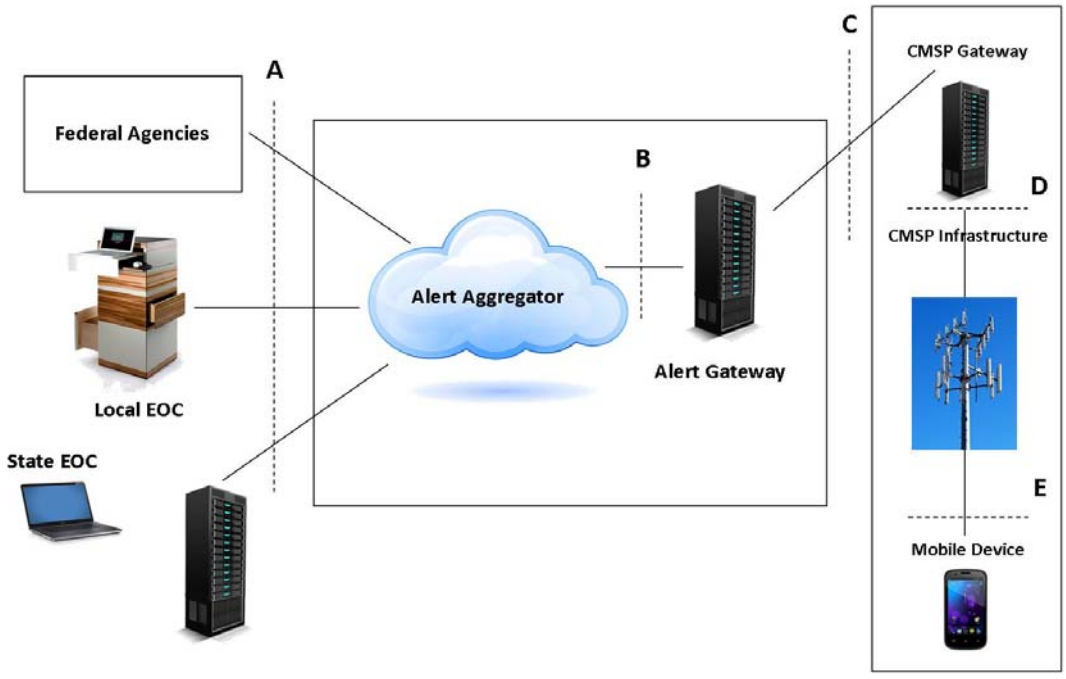

Figure 1: *WEA Architecture*

5. While the response to WEA from Participating CMS Providers and alert originators has been overwhelmingly positive, stakeholders, including state and local alert originators, have raised several concerns about WEA capabilities and opportunities for system testing and proficiency training for alert originators. For example, state and local alert originators raise concerns about the inability of non-federal government entities to conduct end-to-end tests of the system.[23] Alert originators also have raised

[21] *See infra Figure 1.*

[22] From a technical standpoint, the WEA system currently deployed by FEMA and Participating CMS Providers is based on standards created by the Alliance for Telecommunications Industry Solutions (ATIS), the Telecommunications Industry Association (TIA) (jointly, ATIS/TIA), and the 3rd Generation Partnership Project (3GPP). *See CSRIC WEA Messaging Report* at 7. We note that nothing in the WARN Act requires WEA to be a cell-broadcast-based service.

[23] *See* CSRIC IV, WORKING GROUP TWO, WIRELESS EMERGENCY ALERTS, TESTING SUBCOMMITTEE, FINAL REPORT 7, 9 (2014), *available at* http://transition.fcc.gov/pshs/advisory/csric4/CSRIC_IV_WG-2_Testing-Rprt_061814.pdf (continued….)

concerns that the 90-character limit for WEA messages does not allow them to provide sufficient information to their constituents about emergencies.[24] Further, alert originators believe that it would be ideal for all WEA-enabled mobile devices in an alert area to receive a WEA message, while excluding mobile devices outside of the alert area.[25] This need for more accurate geo-targeting of WEA alerts is supported by research findings in the *START Report*, issued by the Department of Homeland Security, Study of Terrorism and Response to Terrorism (START), which state that "the effectiveness of WEA Alert Messages may remain suppressed until they can be distributed to finer geospatial targeted populations so that messages only reach people who are at risk."[26] The Government Accountability Office (GAO) also recommended that the FCC, in conjunction with FEMA, review and update rules governing character limitations, geo-targeting, and testing procedures.[27]

6. In light of these concerns, and considering the many advancements in wireless technology since the adoption of the Commission's WEA rules in 2008, including the widespread use of smartphones and the development of 4G technologies,[28] the Commission tasked its Communications Security, Reliability, and Interoperability Council (CSRIC) IV, a federal advisory committee, with reviewing the current WEA rules and recommending any changes, as appropriate.[29] In 2014, CSRIC IV

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(last visited Apr. 16, 2015) (*CSRIC WEA Testing Report*). Under the Commission's rules, there is no method for state and local alert originators to test the WEA system. *See CSRIC WEA Messaging Report* at 7, 9.

[24] *First Report and Order*, 23 FCC Rcd at 6174, ¶ 82; *see also CSRIC WEA Messaging Report* at 22-23.

[25] *See CSRIC WEA Messaging Report* at 17, 28.

[26] DEPARTMENT OF HOMELAND SECURITY STUDY OF TERRORISM AND RESPONSES TO TERRORISM, COMPREHENSIVE TESTING OF IMMINENT THREAT PUBLIC MESSAGES FOR MOBILE DEVICES 37 (2014) (*START Report*). START is a university-based research and education center, headquartered at the University of Maryland, comprised of an international network of scholars committed to the scientific study of the human consequences of terrorism in the United States and around the world. START was established in 2005 with Department of Homeland Security grant funding as a U.S. Department of Homeland Security Center of Excellence, tasked with utilizing state-of-the-art theories, methods, and data from the social and behavioral sciences to improve the understanding of the origins, dynamics, and social and psychological impacts of terrorism. *See* NATIONAL CONSORTIUM FOR THE STUDY OF TERRORISM AND RESPONSES TO TERRORISM (START), ABOUT START, http://www.start.umd.edu/about/about-start (last visited May 12, 2015). Further, as required by the WARN Act, the Department of Homeland Security has sponsored research by START to improve WEA geo-targeting and message interpretation. WARN Act § 604.

[27] *See* GOVERNMENT ACCOUNTABILITY OFFICE, EMERGENCY ALERTING: CAPABILITIES HAVE IMPROVED, BUT ADDITIONAL GUIDANCE AND TESTING ARE NEEDED, GAO 13-375 (2013).

[28] Fourth generation (4G) mobile telecommunications technology standards include Long Term Evolution (LTE) and Worldwide Interoperability for Microwave Access (mobile WiMAX). *See* Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993; Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless, Including Commercial Mobile Services, WT Docket 13-135, *Seventeenth Report*, 29 FCC Rcd 15311, 15333, ¶ 59 (2014) (*2014 Competition Report*). "LTE increases the capacity and speed of wireless networks by redesigning and simplifying the network architecture to transition from the existing combination of circuit and packet switching to an all-IP architecture system." *See* Promoting Interoperability in the 700 MHz Commercial Spectrum, WT Docket Nos. 12-332, 12-69, *Report and Order and Order of Proposed Modification*, 28 FCC Rcd 15122, 15126-27, ¶ 7 (2013). A "smartphone" is a cellphone and handheld computer that has the functionality of a personal computer, but is compact, has a high-resolution screen, and supports voice recognition. *See* PCMAG ENCYCLOPEDIA, http://www.pcmag.com/encyclopedia/term/51537/smartphone (last visited May 14, 2015).

[29] *See* LARISSA HERDA, CSRIC IV WORKING GROUP DESCRIPTIONS AND LEADERSHIP 2-3 (2014), *available at* http://transition.fcc.gov/bureaus/pshs/advisory/csric4/CSRIC%20IV%20Working%20Group%20Descriptions%2010%2023%2014.pdf (last visited Oct. 2, 2015). CSRIC is a federal advisory committee charged with providing recommendations to the FCC to ensure, among other things, the optimal security and reliability of communications systems, including telecommunications, media, and public safety systems, subject to the requirements of the Federal Advisory Committee Act (FACA). *See* 5 U.S.C.A. § 10.

submitted two reports recommending rule changes and other actions to facilitate improvements to WEA.[30] Informed by the CSRIC IV recommendations, as well as by the *START Report*, we now seek comment on several proposals designed to improve WEA and to facilitate more effective community-initiated alerting.

III. NOTICE OF PROPOSED RULEMAKING

A. WEA Messaging

1. Increasing Maximum WEA Character Length

7. Under the Commission's rules, WEA messages are currently limited to a maximum length of 90 characters.[31] In the *First Report and Order* the Commission concluded that adopting a 90-character text message protocol would serve the public interest because it would allow Participating CMS Providers to transmit WEA messages without requiring technical changes to their underlying infrastructure, and because 90-character messages were considered to be of sufficient length to get the consumer's attention, so they could then seek out other media for confirmation of the alert and for further information.[32] Importantly, the Commission envisioned that Participating CMS Providers would eventually deploy technologies capable of messages longer than 90 characters.[33]

8. In its recent report CSRIC IV finds that the majority of commercial mobile wireless networks and network technologies, such as GSM, UMTS, and LTE, can support messages with a larger number of characters.[34] Moreover, CSRIC IV recommends that the Commission expand the character limit for WEA messages sent using 4G LTE-based infrastructure and devices to a maximum of 280 characters, pending confirmation by the Alliance for Telecommunications Industry Solutions (ATIS), and the Telecommunications Industry Association (TIA) (jointly, ATIS/TIA) that such an increase of the character length is feasible.[35] CSRIC IV recommends that the necessary modifications to industry standards supporting the coexistence of 90- and 280-character alerts can be completed within one year of the issuance of an appropriate report and order.[36] Subsequent to CSRIC IV's recommendations, ATIS/TIA released its *Feasibility Study for LTE WEA Message Length* in October 2015, and confirms that extending WEA message character length is feasible.[37] The *Feasibility Study for LTE WEA Message Length* recommends a maximum WEA message length of 360 characters,[38] where a minimum of 280 and

[30] *See CSRIC WEA Testing Report* (exploring various facets of the current WEA testing paradigm with the goal of developing an approach that would support an option for state and local "end-to-end" testing); *CSRIC WEA Messaging Report* (examining the feasibility and desirability of expanding the maximum character limit for WEA messages; enhancing WEA message content with multimedia; and improving WEA geo-targeting).

[31] *See* 47 C.F.R. § 10.430.

[32] *First Report and Order*, 23 FCC Rcd at 6174, ¶ 83.

[33] *See id.* at 6162, ¶ 42. This conclusion was consistent with the CMSAAC recommendation that WEA alerts be limited in size to accommodate the capabilities of CDMA2000, one of the primary wireless network technologies deployed at that time. *See CMSAAC Report* at 43, 56; *CSRIC WEA Messaging Report* at 15.

[34] *See CSRIC WEA Messaging Report* at 16 ("LTE is capable of broadcasting more than 90 characters"). Global System for Mobile (GSM) Communications is a standard developed by the European Telecommunications Standards Institute (ETSI) to describe protocols for second-generation (2G) digital cellular networks used by mobile phones. Universal Mobile Telecommunications System (UMTS) is the third generation 3G) of mobile telecommunications technology developed and maintained by 3GPP. Long-Term Evolution (LTE) is the standard for modern, fourth generation mobile telecommunications developed by 3GPP.

[35] *See id.* at 44.

[36] *See id.*

[37] *See* ATIS/TIA, FEASIBILITY STUDY FOR LTE WEA MESSAGE LENGTH 19 (2015) (*ATIS/TIA Feasibility Study for LTE WEA Message Length*).

a maximum of 372 characters can be included in two transmission segments.[39] The study also notes, however, that additional WEA enhancements, such as improved geo-targeting and support for multimedia and multilingual alerts, may decrease their maximum recommended character length, pending further study.[40]

9. Consistent with the CSRIC IV recommendations and the recent ATIS/TIA study, we propose to amend Section 10.430 of our rules to expand the maximum permissible length of WEA messages from 90 to 360 characters of alphanumeric text. Specifically, we propose to extend the character limit for those networks and devices for which it is technically feasible to deliver and process 360-character messages, as discussed in greater detail below, while continuing to allow the delivery of 90-character messages on 2G and 3G networks and devices.[41] In this regard, we seek to balance the capabilities of 4G LTE networks with the limitations of legacy networks. We seek comment on this proposal, and the extent to which it would serve the needs of state and local governments to provide more detailed alert information to the public sufficient to motivate appropriate and swift action to save lives and protect property.

10. Expanding the maximum character length for WEA messages to 360 characters could address alert originators' concerns that they are unable to motivate the public to take appropriate protective action using messages limited to 90 characters.[42] According to the National Center for Missing and Exploited Children (NCMEC), "[i]t can be extremely difficult to fit sufficient descriptive information within a 90-character limit in a meaningful and understandable manner that doesn't confuse the public."[43] The National Weather Service (NWS) states that increasing the maximum WEA message length "would improve the ability of NWS and non-weather alerting authorities to convey critical life-saving information over WEA, such as spelling out key terms which are not abbreviated and may not be well understood."[44] CSRIC IV and START concur that longer alert messages make it easier for the public to understand the nature of an emergency and the responsive action alert originators advise them to take.[45] For example, according to the *START Report*, longer alert messages improve message interpretation, reduce "milling" by personalizing alert messages, and hasten a protective response.[46] FEMA also

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[38] *Id*. The display characters in a WEA message are always encoded using GSM 7-bit format. With GSM 7-bit, each display character takes 7 bits of data. *See id.* at 3. Bits of data are compiled into octets. *See id.* 82 octets constitutes a Cell Broadcast (CB) Data Page. *See id.* at 4. Data pages are transmitted over the air as System Information Blocks (SIBs). *See id.* at 8. Partial SIBs are transmitted as segments formatted either as 1A (263 octets) or 1C (203 octets). *See id.* at 9. SIB12 messages are transmitted with a periodicity defined by the CMS Provider which can be 80 milliseconds (ms), 169ms, 320ms, 640ms, 1.28 seconds (s), 2.56 s and 5.12 s. Thus, periodicity varies proportionally with message delivery delay. *See id.* at 12. "Lower value of periodicity would reduce the delay, but could increase battery consumption at the mobile device." *Id.*

[39] *See id.* at 11.

[40] *See id.*

[41] 2G and 3G networks are collectively referred to as "legacy" networks.

[42] *See CSRIC WEA Messaging Report* at 31-33; *see also START Report* at 34.

[43] Letter from Linda Kreig, Acting Chief Executive Officer for the National Center for Missing and Exploited Children, to Marlene H. Dortch, Secretary, FCC, PS Docket No. 15-91, at 2, 3 (filed May 5, 2015) (NCMEC May 5, 2015 *Ex Parte* Letter).

[44] Letter from Michael E. Gerber, Meteorologist, Office of Communications, NOAA/National Weather Service, to Marlene H. Dortch, Secretary, FCC, PS Docket No. 15-91, at 1 (filed May 21, 2015) (NWS May 21, 2015 *Ex Parte* Letter) (providing, for example, the use of "Mountain Daylight Time" instead of "MDT," or "Georgia Emergency Management Agency" instead of "GEMA").

[45] *See CSRIC WEA Messaging Report* at 56, Appendix B; *see also START Report* at 34.

strongly supports increasing the character length of WEA messages.[47] We seek comment on whether expanding WEA messages to 360 characters would be likely to promote public understanding and swifter action in response to an emergency. We also seek comment on how an increase in the length of WEA messages would affect the accessibility of such messages by individuals with disabilities, senior citizens, and persons with limited English proficiency.[48] We seek comment on how to quantify the potential life-saving benefits of increasing the maximum character length of WEA messages, as well as of the rules we propose today.[49]

11. If we expand the maximum character length for WEA messages, we seek comment on whether 360 characters is the optimal maximum. We seek comment on the number of characters necessary to provide the public with sufficiently detailed information about the emergency situations that WEA is designed to address, and to encourage swift and effective public action in response to such emergencies. For example, the *START Report*'s finding that longer alerts improve public response was based on 1,380 character messages.[50] Is such a message length technically feasible? Would a 1,380 character message would better serve the public interest? The *START Report* also found that some alert originators expressed a preference for 140-character messages, based on their view that the public may be unlikely to read longer messages.[51] In this regard, we observe that the social media service Twitter uses messages limited to 140 characters in order to disseminate information about socially relevant phenomena, including emergency alerts and warnings.[52] What can we learn about the way that people use

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[46] *START Report* at 34. "Milling" is a behavior in which "individuals interact with others to confirm information and develop a view about the risks they face at that moment and their possible responses. Milling creates a delay between the time a warning is received and the time protective action is taken." *See* COMPUTER SCIENCE AND TELECOMMUNICATIONS BOARD; DIVISION OF ENGINEERING AND PHYSICAL SCIENCES; NATIONAL RESEARCH COUNCIL, PUBLIC RESPONSE TO ALERTS AND WARNINGS USING SOCIAL MEDIA: REPORT OF A WORKSHOP ON CURRENT KNOWLEDGE AND RESEARCH GAPS 4 (2013), *available at* http://www.nap.edu/catalog.php?record_id=15853 (last visited Jun. 9, 2015). Specifically, the *START Report* finds that shorter (90- or 140-character) messages are substantially less effective at helping people overcome their preconceptions about specific threats, and, consequently, are less likely than longer messages (1,380 characters) at guiding people to take protective action. *START Report* at 30.

[47] *See* Letter from Wade Witmer, Deputy Director, FEMA IPAWS Division, and Mark Lucero, Chief Engineer, FEMA IPAWS Division, to Marlene H. Dortch, Secretary, FCC, PS Docket No. 15-91, at 1 (filed Jun. 18, 2015) (FEMA Jun. 18 *Ex Parte* Letter).

[48] *See Ex Parte* Filing from Wireless RERC, to Marlene H. Dortch, Secretary, FCC, Re: Open Proceedings of the Emergency Alert System and the Commercial Mobile Alert System, April 25, 2011 at 28 (indicating that 46% of survey participants who were deaf found the 90 character message length "too short"), *available at* http://www.wirelessrerc.gatech.edu/sites/default/files/publications/Ex%20Parte%20WEC%20filing%20%28final%29.doc; http://www.wirelessrerc.gatech.edu/content/publications/emergency-communications-and-people-disabilities (last visited June 19, 2015).

[49] In other items, the Commission has used the Value of a Statistical Life (VSL) as the basis for quantifying benefits in terms of lives saved. *See*, *e.g.*, Review of the Emergency Alert System, EB Docket 04-296, *Sixth Report and Order*, 30 FCC Rcd 6520, 6545, n.178 (2015) (*Sixth Report and Order*).

[50] *START Report* at 30. At the same time, however, the *START Report* finds that "[t]here is nothing inherently better about 1,380-character messages." *Id.* at 35. Rather, "people need to be provided with sufficiently detailed information about exactly what steps to take to protect themselves, and the number of characters needed to accomplish this likely varies across hazards." *Id.* at 31.

[51] *Id.* at 31.

[52] *See* Gabriela Pena, *Twitter Alerts: Critical Information When You Need it Most*, TWITTER BLOG (Sep. 25, 2013, 4:58 PM), https://blog.twitter.com/2013/twitter-alerts-critical-information-when-you-need-it-most (last visited Jun. 9, 2015) (announcing the launch of Twitter Alerts, "a new feature that brings us one step closer to helping users get important and accurate information from credible organizations during emergencies, natural disasters or moments when other communications services aren't accessible.").

Twitter and other social media platforms that can inform our policymaking with respect to the length of WEA messages?

12. We seek comment on the technical feasibility of supporting WEA messages longer than 90 characters. As confirmed by ATIS/TIA, CSRIC IV states that 4G LTE networks and devices are capable of delivering 360-character alerts,[53] and we anticipate that future network iterations will continue to support messages with a maximum character length of at least 360 characters. We observe that the nation's four largest CMS Providers have all but completed their transition to 4G technologies.[54] In addition to the nation's largest CMS Providers, smaller Participating CMS Providers are also transitioning to 4G technologies; for example, more than 93 percent of U.S. Cellular's customers have access to 4G LTE,[55] and Sprint and NetAmerica Alliance have partnered with the Competitive Carriers Association to accelerate smaller Participating CMS Providers deployment of 4G LTE across rural America.[56] We also seek comment regarding how the incorporation of the additional WEA enhancements we propose below (such as support for multimedia and multilingual alerts) may affect the implementation of WEA messages with a maximum length of 360 displayable characters.[57] For instance, would the metadata associated with the inclusion of a URL compete with the maximum text limitation for WEA messages?

13. CSRIC IV concludes that the existing 90-character limit should remain for legacy networks and devices due to these networks' limitations and its expectation that the overwhelming majority of CMS Provider infrastructure and mobile devices will soon achieve 4G LTE capability.[58] We seek comment on this view. We seek comment on whether the coexistence of 90- and 360-character alerts might cause public confusion. We also seek comment on the extent to which it would be feasible

[53] *See CSRIC WEA Messaging Report* at 44; *see also ATIS/TIA Feasibility Study for LTE WEA Message Length* at 19 (2015).

[54] *See 2014 Competition Report*, 29 FCC Rcd at 15402, ¶ 183 (AT&T); *id.* at 15402-03, ¶ 184 (Verizon); *id.* at 15403-04, ¶¶ 185-86 (Sprint); *id.* at 15404, ¶¶ 187 (T-Mobile); Cam Bunton, *T-Mobile's LTE Coverage Map Will Look Like This by the End of 2015*, T-MO NEWS, http://www.tmonews.com/2015/02/t-mobiles-lte-coverage-map-will-look-like-this-by-the-end-of-2015/ (last visited Oct. 20, 2015) (stating that T-Mobile's LTE service covered 265 million people as of February 2015, and that their target is to reach 300 million (94 percent of Americans) by the end of 2015). AT&T's 4G LTE build was reported "essentially complete" by the summer 2014. *See CSRIC WEA Messaging Report* at 25. As of January 2014, Sprint had rolled out LTE in 340 of 416 markets nationwide and Sprint's LTE network covered more than 200 million people as of February 2014. *See* Sprint, *Sprint Rolls Out 4G LTE in More Cities*, News Release (Jan. 27, 2014), *available at* http://newsroom.sprint.com/news-releases/sprint-rolls-out-4g-lte-in-more-cities.htm; *see also* Wireless Telecommunications Bureau Provides Details About Partial Economic Areas, GN Docket No. 12-268, *Public Notice*, 29 FCC Rcd 6491 (WTB 2014). T-Mobile's 4G LTE network covers 250 million people and the company has announced its expectation to expand its coverage to 300 million people in 2015. *See* T-Mobile, *T-Mobile US Reports Third Quarter 2014 Results*, News Release (October 27, 2014), *available at* http://newsroom.t-mobile.com/news/company-news/t-mobile-us-reports-third-quarter-2014-results.htm. Verizon Wireless has implemented LTE in at least 500 markets covering 303 million people (95 percent of the U.S. population), noting that it had "virtually wrapped up its deployment" as of June 2013. *See* Verizon, *LTE Information Center*, News Release, *available at* http://www.verizonwireless.com/news/LTE/Overview.html (last visited Apr. 23, 2015).

[55] *See 2014 Competition Report* at 15404, ¶ 188. Additionally, regional carriers, many of whom also participate in WEA, continue to roll out expanded LTE service. *See CSRIC WEA Messaging Report* at 26.

[56] *See* Sprint, *Sprint, Competitive Carriers Association and Net America Alliance Join Forces to Accelerate Deployment and Utilization of 4G LTE Across the United States*, News Release, Mar. 27, 2014), *available at* newsroom.sprint.com/news-releases/sprint-competitive-carriers-association-and-netamerica-alliance-join-forces-to-accelerate-deployment-and-utilization-of-4g-lte-across-the-united-states.htm (last visited May 19, 2015).

[57] *See ATIS/TIA Feasibility Study for LTE WEA Message Length* at19 (observing that the inclusion of additional WEA enhancements, such as the inclusion of map information, may affect maximum WEA message length).

[58] *See CSRIC WEA Messaging Report* at 44.

for alert originators and Participating CMS Providers to support the coexistence of both 90- and 360-character alerts.[59]

14. CSRIC IV considered multiple approaches that would accommodate the existing base of legacy networks and mobile devices, while accounting for 4G technology's ability to deliver and receive longer messages. For example, one approach would be for the alert originator to "create two WEA [a]lert [m]essages, the first adhering to the 90 displayable character maximum and the second to support the longer displayable character length."[60] Alternatively, one WEA message could be generated, the first 90 characters could be delivered to legacy devices, "and the full longer displayable characters [could be] delivered to future enhanced WEA LTE mobile devices."[61] A third alternative would be the transmission of a longer message in four parts over legacy networks (and in a single message over 4G networks, where feasible).[62] We seek comment on the feasibility of these alternatives and any other approaches for implementing an expanded WEA message. FEMA states that standards applicable to the Integrated Public Alert and Warning System (IPAWS) would need to be updated in order for IPAWS to accept longer messages, and that a software update would likely be necessary to enable alert origination software to initiate longer messages.[63] NWS states that it could provide a longer WEA message in addition to the 90-character message, if necessary.[64] Is commercially available alert origination software capable of automatically generating 90- and 360-character alerts from one message? Are there additional technological solutions, not considered by CSRIC IV, which would more effectively enable the transmission of longer alerts across all technologies, including legacy networks and devices? We also seek comment on the extent to which existing standards would need to be modified to accommodate the coexistence of 90- and 360-character maximum messages.[65]

[59] CSRIC IV supports the coexistence of 90- and 280-character message length standards. *See id.* at 44 ("It is recommended that the industry modify existing CMAS/WEA standards to support coexistence of both the legacy 90 characters of displayable text for use on 2nd and 3rd Generation CMS Provider Infrastructure, and a message length of 280 displayable characters for 4G LTE CMS Provider Infrastructure including the addressing of backward compatibility issues.").

[60] *Id.* at 61, Appendix C.

[61] *Id.*

[62] *See id.*

[63] *See* FEMA June 18, 2015 *Ex Parte* Letter at 1 ("[T]he Federal Alert Gateway software will need to change and the IPAWS Division will need to coordinate the change with the software tool vendors that support alerting authority users with tools enable sending of alert messages through IPAWS."). Federal, State, local, tribal and territorial alerting authorities can use IPAWS and integrate local systems that use Common Alerting Protocol standards with the IPAWS infrastructure. IPAWS provides public safety officials with an effective way to alert and warn the public about serious emergencies using the Emergency Alert System (EAS), Wireless Emergency Alerts (WEA), the National Oceanic and Atmospheric Administration (NOAA) Weather Radio, and other public alerting systems from a single interface. *See* FEMA, INTEGRATED PUBLIC ALERT & WARNING SYSTEM, https://www.fema.gov/integrated-public-alert-warning-system (last visited Jun. 25, 2015).

[64] *See* NWS May 21, 2015 *Ex Parte* Letter at 1.

[65] CSRIC IV observes that these standards and associated supplements would include, but are not limited to, the following: (1) ATIS-0700008 (Cell Broadcast Entity (CBE) to Cell Broadcast Center (CBC) Interface Specification); (2) ATIS-0700010 (CMAS via EPS Public Warning System Specification); (3) ATIS-0700014 (Implementation Guidelines for CMAS Handling of CMAS, Supplemental Information Broadcast); (4) J-STD-100 (Joint ATIS/TIA CMAS Mobile Device Behavior Specification); (5) J-STD-101 (Joint ATIS/TIA CMAS Federal Alert Gateway to CMSP Gateway Interface Specification); (6) J-STD-102 (Joint ATIS/TIA CMAS Federal Alert Gateway to CMSP Gateway Interface Test Specification); (7) 3GPP TS 23.041 (3GPP Technical realization of Cell Broadcast Service (CBS)); and (8) OASIS CAP v1.2 (IPAWS Profile for the OASIS Common Alerting Protocol IPAWS USA). *See CSRIC WEA Messaging Report* at 50.

15. We propose that Participating CMS Providers should be required to come into compliance with our proposed WEA messaging rules within one year of the adoption of final rules.[66] With respect to our proposal to allow the continued delivery of 90-character messages to legacy networks and devices, would it be preferable to adopt a date certain by which all Participating CMS Providers must be able to deliver 360-character WEA messages, rather than allowing the co-existence of 90- and 360-character WEA messages? If so, in what timeframe should we sunset the 90-character WEA message length? Should the date of any sunset be contingent upon the satisfaction of a particular condition, such as the achievement of a particular milestone (*e.g.*, the completion of a 4G network deployment milestone or the completion of any necessary standards work by ATIS/TIA or other standards bodies)?

16. Finally, we seek comment on the costs associated with changing the maximum character length for WEA messages. To what extent can Participating CMS Providers leverage existing resources and infrastructure deployed for commercial purposes to satisfy the requirement we propose today? What additional network resources, if any, are necessary to comply with our proposed rule? If the delivery of expanded WEA messages can be accomplished through a software upgrade, would such upgrades fall within the scope of Participating CMS Providers' fixed-maintenance contracts, thus resulting in a cost of near zero? We also seek comment on mitigating factors that could offset potential costs, including those for small and rural Participating CMS Providers. We seek comment on any burden associated with allowing Participating CMS Providers to continue delivering shorter WEA messages using legacy devices and networks, while simultaneously delivering the expanded WEA messages on their 4G networks. We also seek comment on the costs and benefits of any potential alternative approaches. Specifically, we seek comment on the extent of cost savings expected to result from expanding the maximum character length to 360, as opposed to requiring that longer messages be issued as sequential 90-character alerts.

2. Classifying Emergency Government Information

17. The WEA rules currently provide for three classifications of WEA message: Presidential Alerts, Imminent Threat Alerts, and AMBER Alerts.[67] For an alert to be issued through WEA, it must fall within one of these three categories. In the *First Report and Order*, the Commission adopted these three categories in the public interest because they aligned with the Commission's interpretation of "emergency" alerts under the WARN Act, and because additional alert categories could cause the public to disregard WEA alerts or cause the delivery of alerts to be delayed.[68] In this regard, the Commission's conclusion was consistent with the CMSAAC's finding that supporting these three alert classes achieves the best balance between warning of imminent threats to life and property and the limitations of Participating CMS Provider networks at that time.[69] However, FEMA suggests that communities need the ability to share information beyond the nature of an emergency and how to respond to that emergency; they need the ability to provide additional instructions and information that may contribute to saving lives.[70]

18. We propose to amend the WEA rules to create an additional class of WEA message, "Emergency Government Information." We propose to define an Emergency Government Information message as an essential public safety advisory that prescribes one or more actions likely to save lives and/or safeguard property during an emergency. According to CSRIC IV, examples of Emergency

[66] We discuss the timeframe for implementing this proposal, as well as for implementing the other proposals in this *Notice*, in greater detail in Section III(I) below. *See infra* § III.I.

[67] *See* 47 C.F.R. § 10.400.

[68] *First Report and Order*, 23 FCC Rcd 6155-6156, ¶ 26-27.

[69] *See CMSAAC Report* at 42.

[70] *See* FEMA Jun. 18, 2015 *Ex Parte* Letter at 3.

Government Information messages include "boil water" advisories,[71] and messages indicating shelter locations in the event of long-term or severe flooding, hurricanes, or tornados.[72] We seek comment on our proposed definition of Emergency Government Information, and on whether enabling the delivery of Emergency Government Information messages would expand the alerting toolkit available to government entities in a meaningful way, complementing existing WEA classes and allowing the provision of more detailed information about how to protect life and property.

19. We seek comment on how we can ensure that Emergency Government Information messages are used appropriately and in circumstances where they would be most effective at precipitating protective action. According to CSRIC IV, "[a]n Emergency Government Information message should only be used to provide information to assist citizens regarding actions to take resulting from an imminent threat to life and property."[73] Would Emergency Government Information be most effective if defined as a standalone message, the issuance of which is predicated upon the fulfillment of certain necessary conditions? Or, on the other hand, should Emergency Government Information messages be used only to supplement Imminent Threat Alerts? What guidelines and parameters would ensure that Emergency Government Information messages are used in an appropriate manner? CSRIC IV recommends that only "appropriate agencies" become authorized to issue Emergency Government Information messages.[74] We seek comment on whether we should adopt that approach. If we do, are there particular entities which would be particularly appropriate sources of Emergency Government Information?[75]

20. We seek comment on the benefits and costs of creating this additional class of WEA alert. Would such messages help to save lives and protect property? What costs, if any, would be imposed on Participating CMS Providers, alert originators, and consumers? Are there any measures that could be taken to mitigate these costs? Is alert origination software currently capable of issuing Emergency Government Information messages using predefined CAP fields and free-form text, or would a software update be required? Would creating an additional category of alerts desensitize the public to other types of alerts? We believe that Participating CMS Providers could use the same hardware to

[71] A "Boil Water Advisory" is a notification issued by a public utility as a preventative measure if there is a strong possibility of bacterial contamination in the drinking water system that could make people sick. Boil Water Advisories often go into effect as a result of microbial violations, natural disasters, vandalism to water treatment equipment or equipment failure. *See* CENTER FOR DISEASE CONTROL AND PREVENTION, DRINKING WATER ADVISORY COMMUNICATION TOOLBOX 11 (2013).

[72] *See CSRIC WEA Messaging Report* at 46.

[73] *Id.*

[74] *Id.*

[75] Under FEMA guidelines, a federal, state, local, tribal or territorial entity that applies for authority for the use of the Integrated Public Alert and Warning System (IPAWS) is designated as a Collaborative Operating Group (COG) by the IPAWS Program Management Office. A COG may have members from multiple jurisdictions with each individual member account administered through its software system. Before a public safety entity may generate WEA alert messages through IPAWS, it must undergo a four-step process administered by FEMA. First, an organization must procure IPAWS compatible software. Second, to become a COG, a Memorandum of Agreement (MOA) must be executed between the sponsoring organization and FEMA. MOAs govern system security. Third, alerting authorities that wish to send alerts to the public through IPAWS must complete an application defining the types of alerts they intend to issue and the prescribed geographic warning area. Fourth, alerting authorities must complete FEMA's IPAWS web-based training, which includes skills to draft appropriate warning messages and best practices for effective use of CAP. Once these steps are completed, alerting permissions will be implemented in IPAWS, and the alerting entity will be able to send alerts and warnings in the geographically prescribed areas. *See* FEMA, HOW TO SIGN UP FOR IPAWS https://www.fema.gov/how-sign-ipaws (last visited May 14, 2015). Several PSAPs have obtained alerting authority to generate WEA alert messages through IPAWS. *See* FEMA, INTEGRATED PUBLIC ALERT & WARNING SYSTEM AUTHORITIES, https://www.fema.gov/integrated-public-alert-warning-system-authorities (last visited May 8, 2015).

deliver an Emergency Government Information WEA message as they would to deliver another classification of WEA message and seek comment on this view.

21. As required by the WARN Act, we propose to amend Section 10.280 of our rules to allow Participating CMS Providers to enable consumers to opt out of receiving Emergency Government Information messages.[76] CSRIC IV recommends that subscribers should be allowed to opt out of receiving Emergency Government Information, and states that this option need not imply a new device setting, but rather, should be combined with existing settings on the device.[77] The CSRIC IV's report states that the subscriber opt-out capability recommended to be offered for Emergency Government Information would need to be "defined and specified in the Joint ATIS/TIA mobile Device Behavior Specification" in order to ensure that the option to opt out is provided consistently and uniformly across devices, operating systems and software versions.[78] Is this the case? What, if any, other standards or specifications would need to be modified in order to support the provision of Emergency Government Information? Alternatively, would it be preferable for Emergency Government Information to be presented to consumers on an opt-in basis? Would providing such an opt-in option be consistent with the WARN Act?[79]

22. We also seek comment on whether there are other classes of alerts that should be added to WEA. FEMA, for example, asserts that we should revisit the manner in which WEA messages are classified, and recommends that we amend our rules to create the following classes: Federal Alerts (authorized by the President), AMBER Alerts, Severe Weather Alerts, and Local Threat Alerts, each of which would have its own unique attention signal and vibration cadence.[80] As recommended by FEMA, Local Threat Alerts are alerts that may not meet each of the criteria for an imminent threat alert (certainty, urgency and immediacy) but nonetheless may be appropriate for a WEA alert. We seek comment on this approach. Are additional alert types, such as those currently offered by private mass notifications systems on an opt-in basis, appropriate for WEA?[81] Such additional alert notifications would include weather-related closings, severe traffic incidents, and road closures due to special events. Would such additional classifications help adequately capture the variety of events that merit an alert or warning, and help provide clear instructions to alert originators on the kinds of events where use of the WEA system is appropriate? In addition, could additional alert types provide consumers with a more nuanced range of opt-out choices, in terms of the types of alerts they choose to receive, that could encourage consumer participation in WEA? Parties suggesting additional classes should explain how their proposed classes substantively differ from any of the current classes, or the proposed Emergency Government Information class, and the benefits of their proposed class, including why an additional or alternative alert classification is necessary to help save lives and protect property.

[76] WARN Act § 602(b)(2)(E).

[77] *See CSRIC WEA Messaging Report* at 46-47.

[78] *Id.*

[79] Section 602(b)(2)(E) of the WARN Act provides that "[a]ny commercial mobile service licensee electing to transmit emergency alerts may offer subscribers the capability of preventing the subscriber's device from receiving such alerts, or classes of such alerts, other than an alert issued by the President." WARN Act § 602(b)(2)(E). With regard to the opt-in provision raised above, we envision that subscribers would affirmatively elect to activate the capability to receive Emergency Government Information; failure to opt in would prevent the subscriber's device from receiving Emergency Government Information alerts.

[80] *See* FEMA Jun. 18 *Ex Parte* Letter at 3.

[81] *See, e.g.*, ARLINGTON ALERTS, https://emergency.arlingtonva.us/ (last visited Oct. 19, 2015); ALERTDC, http://hsema.dc.gov/page/alertdc (last visited Nov. 17, 2015) (providing information such as traffic conditions and government closures).

3. Content in WEA Alerts

23. The WEA rules currently prohibit the inclusion of embedded references, including telephone numbers and URLs, in all WEA messages except the Presidential Alert.[82] In the *First Report and Order*, the Commission found that allowing URLs or telephone numbers to be included in WEA messages could exacerbate wireless network congestion in the wake of an emergency when wireless networks are already burdened by calls for help from police, fire, and rescue personnel, as well as to family and friends.[83] In this regard, the Commission's conclusion was consistent with the CMSAAC's recommendation that including telephone numbers and URLs in WEA messages would encourage mass usage and potential congestion of wireless networks.[84]

24. The WEA rules currently provide minimum standards for text-based alerts only.[85] The Commission did not adopt technical requirements for WEA alerts with multimedia capability in the *First Report and Order* because, at that time, the Commission believed "it would be premature and not consistent with our obligations under section 602(a) of the WARN Act to adopt standards and requirements for technologies that are still under development."[86] In this regard, the Commission's conclusion was consistent with the CMSAAC's recommendation that support for text should be the minimum requirement for Participating CMS Providers.[87]

25. Given the advancement of time and technology since the adoption of the WEA rules, we believe that it would serve the public interest to reconsider the prohibition on the inclusion of telephone numbers and URLs in WEA messages. We propose to remove Section 10.440 from our Part 10 WEA rules, in order to allow embedded phone numbers and URLs to be included in WEA messages. In doing so, we seek to ensure that Americans may be provided with an immediately accessible method of contacting public safety officials or finding additional information about emergency situations by leveraging the existing capabilities of Participating CMS Provider networks and devices. We believe this approach furthers our goal of using the system to advance public safety. We seek comment on this proposal and on our rationale.

26. We believe that allowing embedded references in WEA messages will improve alert quality and accessibility by offering additional, specific information, and could reduce the risk of network congestion by focusing consumer response, thereby minimizing "milling" behavior. We seek comment on this analysis. To what extent do individuals currently respond to the receipt of a WEA message by using the Internet to confirm the existence of the emergency condition in their area or to search for additional information? Could a synchronized push of link content to device cache reduce non-alert congestion? CSRIC IV, START and FEMA agree that "consideration should be given to including a URL" in WEA messages,[88] but recommend further study on whether the inclusion of URLs in WEA messages could cause network congestion when many people access a link within seconds of alert

[82] *See* 47 C.F.R. § 10.440 ("A WEA Alert Message processed by a Participating CMS Provider must not include an embedded Uniform Resource Locator (URL), which is a reference (an address) to a resource on the Internet, or an embedded telephone number. This prohibition does not apply to Presidential Alerts.").

[83] *First Report and Order*, 23 FCC Rcd at 6162, ¶ 43.

[84] *See CMSAAC Report* at 47.

[85] *See* 47 C.F.R. §§ 10.400 – 10.470.

[86] *First Report and Order*, 23 FCC Rcd at 6174, ¶ 81.

[87] *See CMSAAC Report* at 56.

[88] *CSRIC WEA Messaging Report* at 57, Appendix B; *see also START Report* at 33; FEMA Jun. 18 *Ex Parte* Letter at 3.

receipt.[89] We seek comment on whether such further studies would be helpful, given existing network management technologies that could be deployed to mitigate any potential alert congestion.

27. We believe the potential benefits of allowing embedded phone numbers and URLs in WEA messages may be particularly applicable where AMBER Alerts are concerned. NCMEC states that the ability to provide a URL directing recipients to a website specifically used for AMBER Alerts would be the most important possible enhancement to WEA that the Commission can require at this time.[90] FEMA recommends that a phone number be included in AMBER Alerts, noting that the ATIS/TIA specification for the interface between IPAWS and participating wireless carrier gateways already contains provisions for including a phone number.[91] Every type of missing child advisory issued by NCMEC (*e.g.*, bulletin, notice or poster) includes a phone number to contact with potentially helpful information, except WEA AMBER Alerts.[92] According to the Boston Globe, "[i]n cases in which an abducted child is murdered, 75% of the killings happen within the first three hours."[93] We believe that providing WEA AMBER Alert recipients with URLs linking to images of missing children, their suspected abductors, and potentially the abduction vehicle could make it easier for the public to assist alert originators in locating missing children,[94] and that providing a phone number to call could hasten the provision of such information during a critical period when every second may count. We seek comment on this analysis, and on other potential benefits of allowing alert originators to include embedded references in AMBER Alerts and in WEA messages more generally.

28. We seek comment regarding the potential costs that may be associated with incorporating embedded references in WEA messages, including any costs associated with the potential for increased call volume or network congestion. If alerts were more narrowly geo-targeted, would these potential burdens be mitigated? What network management techniques could be deployed to counter any potential network congestion? We also seek comment on any technical considerations that we should take into account with regard to Participating CMS Providers' ability to support embedded references in WEA messages. According to CSRIC IV, adding URLs to WEA messages would necessitate the revision of

[89] *See CSRIC WEA Messaging Report* at 35-36, 42, 47-48 (CSRIC IV recommends further study by ATIS/TIA to determine how the inclusion of a clickable link/URL might affect network congestion, compared to subscriber milling absent such a link. CSRIC IV also recommends that ATIS/TIA study technical options for mitigating potential network congestion associated with the inclusion of a clickable link).

[90] *See* NCMEC May 5, 2015 *Ex Parte* Letter at 2.

[91] *See* FEMA Jun. 18, 2015 *Ex Parte* Letter at 2.

[92] *See* NCMEC May 5, 2015 *Ex Parte* Letter at 3.

[93] *See* Drake Bennett, *Abducted!*, BOSTON GLOBE (July 20, 2008), http://www.boston.com/bostonglobe/ideas/articles/2008/07/20/abducted/?page=full (last visited May 7, 2015); *see also* NATIONAL CENTER FOR MISSING AND EXPLOITED CHILDREN KEY FACTS, http://www.missingkids.com/KeyFacts (last visited May 12, 2015) (citing KATHERINE BROWN, ET AL., CASE MANAGEMENT FOR MISSING CHILDREN HOMICIDE INVESTIGATION ROB MCKENNA, ATTORNEY GENERAL OF WASHINGTON AND U.S. DEPARTMENT OF JUSTICE OFFICE OF JUVENILE JUSTICE AND DELINQUENCY PREVENTION 13 (2006), *available at* https://www.ncjrs.gov/pdffiles1/Archive/218936NCJRS.pdf (last visited Jun. 10, 2015) (stating that in 89 percent of the abduction cases, the missing child died within 24 hours of disappearing, and that in nearly 60 percent of the cases, more than two hours passed between the time someone realized the child was missing and the time police were notified).

[94] AMBER Alert bulletins to which alert recipients could be linked also include more identifying information about missing children than can be fit within a 90-character message, such as the date the child went missing, the city and state from which the child went missing, the child's current age, sex, race, hair color, eye color, height, weight, the known circumstances of the child's abduction, and a brief description of the child, including personality characteristics and the clothing the child was last seen wearing. *See, e.g.*, NATIONAL CENTER FOR MISSING AND EXPLOITED CHILDREN, MISSING: HELP BRING ME HOME, DAISY ROJAS, http://www.missingkids.com/poster/NCMC/1254544/1/screen (last visited Oct. 1, 2015).

standards for displaying content generated by the URL.[95] We seek comment on CSRIC IV's assertion. What technical challenges would need to be addressed to support the synchronized push of content to be stored in cache for all URL links used in WEA CAP messages? Would it be possible to include interactive links in WEA messages, such that an alert recipient could provide real-time feedback to alert originators that would improve emergency responders' situational awareness and help ensure that adequate and appropriate resources are deployed to the scene of the emergency? For example, a WEA message warning about a developing fire in a multi-story building could ask alert recipients whether they see smoke by responding "yes" or "no," helping emergency responders make decisions about building ventilation that could help to prevent the fire from further spreading. We observe that the *CMSAAC Report* recommended guidelines for translating embedded references from CAP into a format suitable for communication with mobile devices.[96] We also observe, however, that a data connection may be required in order to access content made available through URLs,[97] and that appropriate protocols and cybersecurity protections may need to be developed in order to protect these functions from malicious intrusion.[98] How should these concerns be addressed? Finally, we seek comment on how much, if any, additional data would be necessary to transmit embedded references, along with text, in WEA messages, and on the impact, if any, that transmitting this additional data would have on message delivery latency and mobile device battery life. We also seek comment on the extent of any end-to-end latency in the delivery of WEA messages today, and whether there are ways to employ new technologies to reduce latency for WEA's current functionalities. We seek comment on these and other technical issues that could affect the implementation of this proposal. We observe that AT&T suggests that the use of phone numbers and URLs in WEA alerts should be limited to WEA AMBER Alerts.[99] We seek comment on this alternative.

29. We also seek comment on the efficacy of using embedded URLs to enhance accessibility of WEA for people with disabilities, senior citizens and persons with limited English proficiency,[100] in addition to the general public. Wireless RERC conducted field trials and focus groups regarding disability access to WEA messages and found that users with sensory disabilities prefer to have access to additional information beyond that supplied by the 90-character alert via URLs.[101] We seek comment on

[95] *See CSRIC WEA Messaging Report* at 36.

[96] *See CMSAAC Report* at 74; *see also id.* at 83 (stating that the hyperlink data must be in a domain that is accessible by the Participating CMS Provider Gateway).

[97] *See CSRIC WEA Messaging Report* at 42.

[98] The "appropriate cyber security protections and protocols" for URLs added to WEA messages will likely be the result of the WEA community (including originators, service providers, and vendors) following the guidelines established in the CSRIC IV Cybersecurity Risk Management and Best Practices Final Report and the WEA Cybersecurity Risk Management Strategy for Alert Originators. *See* CSRIC IV, WORKING GROUP FOUR, CYBERSECURITY RISK MANAGEMENT AND BEST PRACTICES WORKING GROUP, FINAL REPORT (2015), https://transition.fcc.gov/pshs/advisory/csric4/CSRIC_IV_WG4_Final_Report_031815.pdf (last visited Jun. 9, 2015) (*CSRIC Cybersecurity Report*); *see also* SOFTWARE ENGINEERING INSTITUTE, WEA PROJECT TEAM, WIRELESS EMERGENCY ALERTS (WEA) CYBERSECURITY RISK MANAGEMENT STRATEGY FOR ALERT ORIGINATORS (2014), *available at* http://resources.sei.cmu.edu/asset_files/SpecialReport/2014_003_001_87729.pdf (last visited Jun. 9, 2015) (*Software Engineering Institute WEA Security Report*).

[99] *See* Letter from Joseph P. Marx, Assistant Vice President, AT&T Services, Inc., to Marlene H. Dortch, Secretary, FCC, PS Docket No. 15-91, at 1-2 (filed May 6, 2015) (AT&T May 6, 2015 *Ex Parte* Letter).

[100] *See infra* Section III.A.4 (discussing further the provision of multilingual WEA messages).

[101] *See Ex Parte* Filing from Wireless RERC, to Marlene H. Dortch, Secretary, FCC, Re: Open Proceedings of the Emergency Alert System and the Commercial Mobile Alert System, April 25, 2011 at 33, available at http://www.wirelessrerc.gatech.edu/sites/default/files/publications/Ex%20Parte%20WEC%20filing%20%28final%29.doc (last visited Nov. 9, 2015). The study participants had sensory limitations that ranged from those who were (continued….)

this conclusion, and on how the inclusion of URLs and phone numbers may facilitate access to information. For example, could a URL provide non-English speakers with access to emergency information in their preferred language?

30. Finally, we seek comment on whether it would serve the public interest to adopt rules governing the provision of multimedia-based alerts, including alerts that contain high-information maps that demonstrate the location of the alert recipient relative to an area affected by an imminent threat, and images of children, suspected abductors and vehicles in AMBER Alerts.[102] We believe that providing multimedia-based alerts could significantly enhance the usefulness of the system, thereby advancing our public safety goals. For example, NWS strongly supports the incorporation of graphical content in WEA messages, stating that this improvement would provide greater clarity in WEA messaging.[103] We recognize that CSRIC IV concludes that it is impractical for current cell broadcast technology, including 4G LTE, to support sending multimedia, such as images and maps, as part of WEA messages without "significant impacts" to Participating CMS Provider infrastructure.[104] However, we observe that mobile alerting technology vendors and Participating CMS Providers agree that other technologies may be able to support multimedia functionality.[105] How much additional data would be associated with the transmission of multimedia content in WEA messages, and what impact, if any, would transmitting this additional data have on message delivery latency and mobile device battery life? We seek comment on these issues, as well as any technical solutions that may serve to enhance the usefulness of WEA alerts for the general public.

4. Providing Multilingual WEA Messages

31. The WARN Act allows Participating CMS Providers to transmit alerts in languages other than English, if technically feasible.[106] The Commission determined in the *First Report and Order* that it was not technically feasible for CMS Providers to deliver commercial mobile alerts in languages in addition to English and that further study was necessary to ensure that system capacity and message latency were not adversely affected.[107] The Commission's conclusion in this regard is consistent with the CMSAAC's observation that rendering multilingual alerts would require additional character sets that would limit the amount of text that could be transmitted in WEA messages and that more precise geo-targeting increases the number of non-English languages that will be encountered.[108] Accordingly, the

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fully deaf or fully blind, to those with enhanced hearing (hearing aid/cochlear implants) or enhanced vision (glasses/contacts). *See id.*

[102] Multimedia content would not count against the limit on alphanumeric characters for WEA messages. *See* 47 C.F.R. § 10.430. The *START Report* defines "high-information maps" as "specifying the areas affected, areas not affected and the receiver's location." *START Report* at 2.

[103] *See* NWS May 21, 2015 *Ex Parte* Letter at 1.

[104] *CSRIC WEA Messaging Report* at 47.

[105] *See* AT&T May 6, 2015 *Ex Parte* Letter, at 2; *see also* Hutch McClendon, May 29, 2015 *Ex Parte* Letter at 2.

[106] *See CMSAAC Report* at 53 (stating that "commercial mobile service providers who elect to transmit emergency alerts may transmit in languages in addition to English to the extent practical and feasible"); *see also* WARN Act § 603(c) (tasking CMSAAC with developing recommendations "for the technical capability to transmit emergency alerts by electing commercial mobile providers to subscribers in languages in addition to English, to the extent practicable and feasible").

[107] *First Report and Order*, 23 FCC Rcd 6170-6172, ¶¶ 71-77.

[108] *See CMSAAC Report* at 53 (noting that "[a]dditional character sets to support multiple languages also will potentially limit the amount of data that can be transmitted; for example, some character sets require 2 Bytes per character versus 1 Byte per character, and thus 90 characters available in the text profile for a CMAM now reduces the text message to 45 characters."). *See CMSAAC Report* at § 5.7.

Commission found it premature to require that Participating CMS Providers transmit alerts in languages other than English,[109] but encouraged WEA stakeholders to develop multilingual alerting capabilities.[110]

32. We seek comment on whether the fundamental technical problems that limited the ability of Participating CMS Providers in 2008 to provide alerts in languages other than English remain barriers to implementing Congress' vision. To the extent these problems remain, are they device-based, network-based, or both? FEMA recommends that WEA should be enhanced to support delivery of alert messages in languages other than English if the alert is made available by the originator in other languages.[111] FEMA observes that "[t]he IPAWS system as currently deployed and based upon the Common Alerting Protocol standards is capable of supporting multiple languages beyond English if the originator of the alert message provides the alert in additional languages."[112] Alert originators state that they want to "[u]se language in the WEA Alert Message that best conveys who is at risk given message length constraints."[113] That could reasonably include a language, other than English, that best serves a particular community. Accordingly, we seek comment on the benefits of supporting multilingual WEA alerts in order to advance our goals for promoting community participation.

33. In raising the issue of multilingual alerts, we note that the Multicultural Media, Telecom and Internet Council (MMTC) has highlighted the importance of providing information about emergencies in languages other than English on numerous occasions.[114] We agree with MMTC that all Americans, regardless of the language they speak, should have access to emergency information. In this *Notice*, we seek comment on the technical implications and potential costs of supporting multilingual WEA alerts. We also seek comment on the impact of requiring WEA alerts in languages other than English on the ability of Participating CMS Providers to comply with the rules we propose today. For example, we seek comment on whether Participating CMS Provider networks continue to experience technical limitations that restrict their ability to offer WEA alerts in languages other than English. How much additional data, if any, would be necessary to support additional languages and/or character sets in WEA messages, and how would the transmission of this additional data affect mobile device battery life and message delivery latency? We seek comment on whether there are other factors that should be

[109] *See First Report and Order*, 23 FCC Rcd at 6173, ¶ 71.

[110] *Id.* at 6175, ¶ 77. The Commission further acknowledges that some individuals who are deaf, hard of hearing, and deaf-blind may prefer to receive information via American Sign Language (ASL), and that ASL cannot be readily conveyed unless delivered via video alerts. The Commission encourages the exploration of such technology to make available the delivery of ASL video alerts.

[111] *See* FEMA Jun. 18 *Ex Parte* at 2-3.

[112] *Id*. Based on FEMA's interaction with alert originators, "automatic translation into multiple languages is not desired due to inaccuracy of current automatic translation method." *Id*.

[113] *CSRIC WEA Messaging Report* at 28.

[114] *See* The Independent Spanish Broadcasters Association, the Office of Communication of the United Church of Christ, Inc., and the Minority Media and Telecommunications Council, Petition for Immediate Interim Relief, EB Docket 04-296 (filed Sept. 22, 2005). We note that MMTC is now called The Multicultural, Media, Telecom and Internet Council. MMTC has made subsequent *ex parte* filings to expand upon and to revise its petition. *See e.g.*, Letter from the Minority Media and Telecommunications Council to Marlene H. Dortch, Secretary, FCC, ET Docket No. 04-296, filed June 18, 2008; Letter from the Minority Media and Telecommunications Council to Marlene H. Dortch, Secretary, FCC, ET Docket No. 04-296 (filed Aug. 17, 2012); Letter from the Minority Media and Telecommunications Council to Marlene H. Dortch, Secretary, FCC, EB Docket No. 04-296 (filed Aug. 4, 2010); Letter from the Minority Media and Telecommunications Council to Marlene H. Dortch, Secretary, FCC, EB Docket No. 04-296 (filed Dec. 12, 2013). The Commission is addressing the MMTC Petition in a separate proceeding.

considered in determining whether to support multilingual alerts, and on how states and local alert originators can best determine which languages are appropriate for their communities.[115]

B. WEA Geo-Targeting

34. In the *First Report and Order*, the Commission adopted a geo-targeting requirement for WEA messages in order to ensure that WEA messages would only be received by those individuals affected by a specific emergency.[116] Under Section 10.450 of the WEA rules, Participating CMS Providers may not transmit WEA messages to areas greater than the county (or county equivalent) that approximates the geocode, circle, or polygon specified by the WEA alert.[117] The Commission anticipated that as more refined and cost effective geo-targeting capabilities became available to Participating CMS Providers they would voluntarily elect to target alerts more granularly.[118] Similarly, the CMSAAC recommended county-based geo-targeting, but acknowledged that it would be desirable to allow for "more flexible geo-targeting to alert areas [to] evolve as technology advances," and recommended that the geo-targeting to alert areas smaller than a county "should be reviewed as part of the biennial review process."[119]

35. Since the Commission adopted its WEA geo-targeting rules in 2008, there has been considerable interest among alert originators in developing more finely targeted WEA messages.[120] Additionally, research scientists at Carnegie Mellon have developed several polygon compression techniques that enable efficient transmission of polygons representing geographical targets.[121] These

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[115] Recently, the Public Safety & Homeland Security Bureau granted a request from Emergency and Community Health Outreach (ECHO), in partnership with Twin Cities Public Television (tpt) and FEMA, for a waiver of the Commission's rules to allow use of the WEA and EAS attention signal, as well as an audible portion of the EAS tones in PSAs, in conjunction with providing EAS PSAs in languages other than English, including Spanish, Hmong and Somali. *See* Request for Waiver of Sections 10.520, 11.45 and 11.46 of the Commission's Rules to Allow Broadcast of Public Service Announcements Produced by Emergency, Community, Health and Outreach to Educate the Public on the Wireless Emergency Alert System and the Emergency Alert System, PS Docket Nos. 07-287, 15-94, *Order*, 30 FCC Rcd 10182 (2015).

[116] *First Report and Order*, 23 FCC Rcd at 6166, ¶ 56; *but see id.* at 6164-65, ¶¶ 51-52 (citing support by Alert Systems, Purple Tree Technologies, Acision, Cell Cast, DataFM, the National Emergency Number Association (NENA), and the California Public Utilities Commission (CAPUC) for the Commission to adopt a sub-county geo-targeting requirement on grounds that such a requirement is technologically possible, and that county-level geo-targeting will likely lead to over-alerting); Francisco Sanchez, April 21, 2015 *Ex Parte* Letter at 1; Letter from William Hutchinson McClendon IV, CEO of Advanced Computer & Communications (AC&C), LLC, to Marlene H. Dortch, Secretary, FCC, PS Docket No. 15-91, at 1-2 (filed, May 6, 2015) (Hutch McClendon, May 6, 2015 *Ex Parte* Letter).

[117] 47 C.F.R. § 10.450 ("A Participating CMS Provider must transmit any Alert Message that is specified by a geocode, circle, or polygon to an area not larger than the provider's approximation of coverage for the Counties or County Equivalents with which that geocode, circle, or polygon intersects. If, however, the propagation area of a provider's transmission site exceeds a single County or County Equivalent, a Participating CMS Provider may transmit an Alert Message to an area not exceeding the propagation area.").

[118] *See First Report and Order*, 23 FCC Rcd at 6164, ¶ 49.

[119] *CMSAAC Report* at 48.

[120] *See, e.g.*, *First Report and Order*, 23 FCC Rcd at 6164-65, ¶¶ 51-52; NWS May 21, 2015 *Ex Parte* Letter at 2 DANIEL GONZALES, DEPARTMENT OF HOMELAND SECURITY, SCIENCE AND TECHNOLOGY, WIRELESS EMERGENCY ALERTS MOBILE PENETRATION STRATEGY 120, 131 (2013) (*WEA Mobile Penetration Strategy*) (expressing that alert originators desire improvements in geo-targeting to prevent alert fatigue and recommending improvements to geo-targeting "as soon as possible").

[121] *See* ABHINAV JAUHRI, MARTIN GRISS AND HAKAN ERDOGMUS, CARNEGIE MELLON UNIVERSITY, SILICON VALLEY CAMPUS, SMALL POLYGON COMPRESSION FOR INTEGER COORDINATES (2015), *available at* https://ams.confex.com/ams/43BC3WxWarn/webprogram/Paper273645.html. A polygon may be used to describe

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techniques are intended to enable compressed polygon vertices to be embedded in emergency alert messages that have strict length restrictions, such as WEA messages.[122]

36. Further, CSRIC IV and START observe that the effectiveness of WEA alert messages may remain suppressed until they can be distributed to finer geospatial areas, so that messages only reach the people who are at risk.[123] "[O]therwise, people who receive WEA Alert Messages may be trained to think they don't apply to them."[124] As CSRIC IV notes, some Participating CMS Providers have made voluntary enhancements to geo-targeting that exceed the Commission's current county-level geo-targeting rules.[125] The enhancements include using an algorithm to geo-target the WEA broadcast to transmission sites capable of best approximating the polygon-based alert area provided by the alert originator,[126] and, in LTE networks, using cell sectorization, a technique whereby a WEA alert is broadcast to only certain sectors within a transmission site.[127] CSRIC IV thus recommends that the Commission amend Section 10.450 of its WEA rules to state "that a Participating CMS Provider may voluntarily transmit any Alert Message that is specified by the Alert Originator using a geocode, circle, or polygon, to an area that best approximates the geocode, circle, or polygon given the constraints of CMS Provider infrastructure topology, propagation area, and other radio and network characteristics."[128] CSRIC IV further recommends that, at a minimum, the Commission should adopt a geo-targeting standard constituting an area no larger than the coverage area of a single transmission site.[129]

37. We propose to revise the Commission's rules to require that Participating CMS Providers must transmit any alert message that is specified by a geocode, circle, or polygon to a target area not larger than the specified geocode, circle, or polygon. If, however, the Participating CMS Provider cannot broadcast the alert to an area that accurately matches the target area, we propose that a Participating CMS Provider may transmit an Alert Message to an area that closely approximates the target area, but in any case not exceeding the propagation area of a single transmission site. In this regard, as a backstop, Participating CMS Providers would be permitted to geo-target WEA alerts with the same level of granularity currently allowed by our WEA rules.[130] CSRIC IV recommends that CMS Providers be allowed to transmit alert messages, on a voluntary basis, to an area that best approximates the target area, "given the constraints of Participating CMS Provider infrastructure topology, propagation area, and other radio and network characteristics."[131] Would this approach weaken our current requirement that WEA alerts be geo-targeted to at least the county level, and would potentially allow Participating CMS

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the complex shapes of alert areas desired to be targeted by alert originators, for example, to describe a flood plain at risk of flooding during a storm surge, and may be of any size.

[122] *See id.*

[123] *See CSRIC WEA Messaging Report* at 59, Appendix B; *see also START Report* at 37.

[124] *CSRIC WEA Messaging Report* at 39; *see also WEA Mobile Penetration Strategy* at 126 (stating that "[o]ver alerting is a significant risk to WEA as long as geo-targeting capabilities are at the county level" and "[i]mproved geo-targeting of WEA messages may be one of the most significant ways to reduce message fatigue").

[125] *See CSRIC WEA Messaging Report* at 40.

[126] *See id.* at 8 (stating that, as a best practice, many Participating CMS Providers already geo-target WEA messages on a sub-county basis, including by using proprietary "algorithms for mapping the intended alert area to the relevant cell sites/sectors in the CMSP network").

[127] *See id.* at 40; *see also id.* at 85, Appendix D.

[128] *Id.* at 44.

[129] *See id.*

[130] *See* 47 C.F.R. § 10.450.

[131] *CSRIC WEA Messaging Report* at 44.

Providers to geo-target alerts to any area, so long as it could be justified by reference to network constraints. We seek comment on our proposal and on this rationale.

38. We seek comment on the technical feasibility of complying with these more granular geo-targeting proposals. Both the WARN Act and the Commission envisioned that WEA technology would evolve to encompass more precisely geo-targeted alerts.[132] In light of the advances in network technology observed by CSRIC IV, specifically network-based solutions already deployed by Participating CMS Providers, is it technically feasible for Participating CMS Providers, utilizing currently available technology, to more accurately geo-target WEA alerts?[133] We specifically seek comment on the state of network-based enhancements needed to implement this process. CSRIC IV states that "the algorithms for mapping the intended alert area to the relevant cell sites/sectors in the CMSP network are considered proprietary and there is no standard method to perform this mapping."[134] How can we ensure that all Participating CMS Providers have access to any relevant techniques that are necessary to implement more granular geo-targeting?

39. Further, we seek comment on other approaches to improve geo-targeting, including device-based geo-targeting solutions. CSRIC IV recommends that ATIS/TIA conduct feasibility studies of the ability of Participating CMS Providers to more narrowly geo-target WEA using network-based, device-based, and third-party-assisted solutions.[135] Network-based geo-targeting solutions include cell sectorization and algorithm-based transmission site selection.[136] A device-based solution entails an alert originator transmitting geographic coordinates for the target area along with the WEA message,[137] and an end-user device using the device's location-based technology to display only those WEA messages that are relevant to the geographic area in which the device is located.[138] CSRIC IV recommends that ATIS/TIA evaluate the extent to which device-based solutions could be optimized by minimizing the amount of data necessary to transmit alert area coordinates, either by compressing the data, circularizing the polygon, or embedding the geographic data in the alert message itself.[139] A third-party-assisted solution (*i.e.*, a service provided by a party other than the mobile device and the Participating CMS Provider) would utilize an external source of geo-location to determine whether the WEA message should be displayed, without relying on the device's own location services.[140]

40. Could a device-based solution improve WEA geo-targeting without burdening Participating CMS Provider infrastructure? Could device-based solutions complement network-based solutions to facilitate the delivery of even more granular WEA messages? Would the provision of alert area coordinates in a WEA message potentially reduce the amount of data available for other message

[132] WARN Act § 604(b)(2); *First Report and Order*, 23 FCC Rcd at 6164 ¶ 49; *see also CMSAAC Report* at 48 ("It is desired that more flexible geo-targeting to alert areas evolve as technology advances.").

[133] *CSRIC WEA Messaging Report* at 40 (describing network based geo-targeting solutions currently used by some Participating CMS Providers voluntarily).

[134] *Id.* at 8.

[135] *See id.* at 41, 45-46.

[136] *See supra* ¶ 36.

[137] Alert area coordinates could also be made available to the device over WiFi, or a cellular data connection. *See CSRIC WEA Messaging Report* at 40.

[138] *See id.* at 40-41. This technique is sometimes referred to as "geo-fencing." *See, e.g.*, NWS May 21, 2015 *Ex Parte* Letter at 2. FEMA agrees that "[g]eo-targeting proficiency can be improved by implementing geographical targeting for WEA broadcasts by cell-sector, including delivery of alert area specifications to the phone enabling mobile-assisted geographical targeting (aka geo-fencing), and other techniques." FEMA Jun 18 *Ex Parte* Letter at 2.

[139] *See CSRIC WEA Messaging Report* at 40.

[140] *See id.* at 41.

elements, such as text and multimedia, and if so, what measures could mitigate this possibility? Carnegie Mellon University has "developed a technique which significantly reduces the amount of data required to convey the location, size, and shape of an NWS alert polygon," suggesting that only a small amount of data may be necessary to transmit alert coordinates to a mobile device.[141] To what extent can the amount of data needed to transmit geographic coordinates be reduced through such optimization methods? Are such methods feasible or advisable? Are there other techniques for efficiently sending alert area coordinates to a device that should be examined? We also seek comment on whether the use of device-based solutions might implicate privacy issues and on the protective measures that might be necessary to implement before a device's location-based services are used for the provisioning of WEA alerts. Finally, we seek comment on the extent to which third-party developers are in the process of developing services to improve WEA geo-targeting.

41. We seek comment on the potential benefits that more accurate geo-targeting may provide. By proposing measures to ensure that WEA messages are more finely targeted and delivered only to recipients who are likely to be affected by the emergency event, we intend to minimize over-alerting and reduce alert fatigue. Do alerts sent to too wide an area result in significant problems? Does or could inaccurate geo-targeting lead to alert fatigue, and, if so, would it cause many individuals to disregard or opt-out of receiving all but the Presidential message?[142] CSRIC IV and START conclude that finer geo-spatial targeting is necessary to ensure WEA Alert Messages only reach those people at risk, and that the "effectiveness of WEA Alert Messages may remain suppressed until they can be distributed to finer geospatial targeted populations so that messages only reach the people who are at risk."[143] We seek comment on these findings and encourage commenters to offer statistical evidence of the anticipated benefits resulting from tightening our geo-targeting requirements. Further, we seek comment on whether improved geo-targeting technology will increase opportunities for wireless providers to offer beneficial services to the companies currently providing mass notification products to localities, employers, and school systems.[144] Specifically, will improved geo-targeting capabilities expand opportunities for wireless carriers and other parties to contract for services outside of WEA that are beneficial to the alert-originating community? We seek comment on whether there are other potential public/private partnerships that could further leverage WEA capabilities and bring additional innovative alerting services to communities.

42. Finally, we seek comment on the potential costs that would result from implementing the more granular geo-targeting requirements we propose today, including through the implementation of network-based, device-based, or third-party-assisted solutions. Would the cost of compliance with our proposed rules through the use of network-based enhancements likely be minimal because Participating CMS Providers are already engaging in such practices voluntarily? What costs would be entailed for Participating CMS Providers that are not currently using geo-targeting best practices? Would the

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[141] ABHINAV JAUHRI, MARTIN GRISS AND HAKAN ERDOGMUS, CARNEGIE MELLON UNIVERSITY, SILICON VALLEY CAMPUS, SMALL POLYGON COMPRESSION FOR INTEGER COORDINATES (Presented at 3rd Conference on Weather Warnings & Communication, AMS June 2015, *available at* https://ams.confex.com/ams/43BC3WxWarn/webprogram/Paper273645.html ; *see also* NWS May 21, 2015 *Ex Parte* Letter at 2 (stating that "by applying this technique to NWS alert polygons whose latitude/longitude pairs consumed 43 to 331 characters per alert, the polygons could be compressed down to 8 to 55 characters").

[142] *See* DEPARTMENT OF HOMELAND SECURITY, SCIENCE AND TECHNOLOGY DIRECTORATE, BEST PRACTICES IN WIRELESS EMERGENCY ALERTS 22 (2013), *available at* http://www.firstresponder.gov/TechnologyDocuments/Wireless%20Emergency%20Alerts%20Best%20Practices.pdf (last visited May 8, 2015) (stating that, "[a]s county residents receive alerts that are not relevant to them, over time this could result in alert fatigue, as the recipients become desensitized to the alerts.").

[143] *CSRIC WEA Messaging Report* at 28; *see also START Report* at 37.

[144] *See* Hutch McClendon, May 29, 2015 *Ex Parte* Letter at 4 (referencing ways in which WEA providers might leverage their alerting capabilities).

implementation of device-based improvements to geo-targeting likely entail a software update to mobile devices? If a software update would be needed, could it be bundled into software updates that Participating CMS Providers would issue for their mobile devices in the regular course of business? What costs might be associated with the delivery of such software updates? Lastly, what costs might be associated with the implementation of a third-party-assisted solution?

C. WEA Testing and Proficiency Training

43. Section 602(f) of the WARN Act provides that "[t]he Commission shall require by regulation technical testing for commercial mobile radio service providers that elect to transmit emergency alerts and for devices and equipment used by such providers for transmitting alerts".[145] Under the current WEA rules, the Commission requires Participating CMS Providers to support Required Monthly Testing (RMT) initiated by FEMA,[146] and testing of the C-Interface.[147] The Commission adopted these testing requirements in the *Second Report and Order* to satisfy the WARN Act's testing requirement in a manner that would ensure the reliability and performance of the new WEA system and the availability and viability of both of its gateway functions.[148] The Commission further noted that the CMSAAC proposed that, in order to ensure the reliability and performance of this new system, certain procedures for logging alerts at the Alert Gateway and for testing the system at the Alert Gateway and on an end-to-end basis should be implemented.[149] Since the deployment of WEA in 2012, the system has grown, technology has changed, and new community-based alert initiators have begun to use WEA to

[145] *Id.* at § 602(f).

[146] A WEA RMT is a WEA message that uses a specifically designed test message defined by J-STD-101 and is delivered from the Federal Alert Gateway Administrator to the commercial mobile service provider gateway. *See* ALLIANCE FOR TELECOMMUNICATIONS INDUSTRY SOLUTIONS, JOINT ATIS/TIA CMAS FEDERAL ALERT GATEWAY TO CMSP GATEWAY INTERFACE SPECIFICATION, J-STD-101 90 (2008) (defining the text of the test alert message as "This is a test of the Wireless Emergency Alert System This is only a test."). Upon receipt of the RMT message, Participating CMS Providers currently have a 24-hour window to distribute the test message in their WEA coverage areas in a manner that avoids congestion or causes other adverse effects on their networks. *See* 47 C.F.R. § 10.350(a)(2). The Participating CMS Provider's gateway routes the test message to the Participating CMS Provider's core infrastructure which, in turn, distributes that broadcast to the targeted network base stations in the WEA coverage area. Most Participating CMS Providers have operational processes in place to receive the RMT on certain handsets that can be configured to receive the RMT message without signaling its receipt on subscribers' handsets. There is no geography selection associated with the RMT in current standards; RMTs are assumed to be nationwide.

[147] *See* 47 C.F.R. § 10.350; *see also supra* ¶ 4 (stating that the C-Interface is a secure, Internet-based interface between the Federal Alert Gateway and Participating CMS Providers' Alert Gateways). In addition to the RMTs, Section 10.350(b) of the rules requires Participating CMS Providers to participate in "periodic testing" of the interface between the Federal Alert Gateway and its CMS Provider Gateway. 47 C.F.R. § 10.350(b). This periodic testing is intended to ensure the availability/viability of both gateway functions. *See id.*

[148] *Second Report and Order*, 23 FCC Rcd 10771-10775, ¶¶ 17, 21, 23. Because WEA was still subject to "significant development" and the Federal Alert Aggregator and Gateway had just recently been identified, the Commission believed that it would be premature to adopt more specific testing requirements. *See id.* at 10775, ¶ 23.

[149] *Id.* at 10771, ¶ 17. CMSAAC defined end-to-end testing as "testing from the Alert Initiator to the CMSP Gateway." *See CMSAAC Report* at 66. FEMA brought a redundant Federal Alert Gateway into operation in May 2013. Redundant gateways are necessary to improve system availability and to reduce single points of failure. The J-STD-101 supports redundant gateways and defines the message transmission requirements. Because redundant gateways are optional, each Participating CMS Provider may employ a different network design to connect Participating CMS Provider gateway(s) to the Federal Alert Gateways. Although the network designs are different, the message transmission arrangement, including test messages, remains consistent regardless of network architecture. We note that Section 10.350(a)(7) of the Commission rules provides that a Participating CMS Provider "must retain an automated log of RMT messages received by the CMS Providers Gateway from the Federal Alert Gateway." 47 C.F.R. § 10.350(a)(7).

address the safety needs of their communities. In the course of analyzing our proposals below, commenters should address whether the proposal is consistent with our statutory authority under the WARN Act or the Communications Act.

1. Promoting State and Local Testing and Proficiency Training

44. GAO and alert originators have raised concerns about the lack of a state/local WEA testing regime.[150] In response, the Commission tasked CSRIC IV with making recommendations on how the Commission could address these concerns.[151] In its report, CSRIC IV observes that, according to state and local alert originators, training and proficiency-building exercises constitute a "fundamental component" of emergency management programs.[152] Additionally, according to CSRIC IV, WEA testing would provide state and local alert originators with opportunities to evaluate their preparedness for responding to life-threatening events, to ensure the software used to generate and the infrastructure used to disseminate WEA messages are operating correctly, and to test for downstream issues.[153]

45. *Readiness Testing.* CSRIC IV considered three potential models for WEA testing: (1) allowing alert originators to utilize the current RMT process; (2) allowing alert originators to conduct WEA tests that could be received by wireless customers that opt in to receive alerts; and (3) allowing alert originators to conduct WEA tests that would be received by all wireless customers, unless they opt out of receiving the test.[154] FEMA currently issues nationwide RMTs that are held up to 24 hours before they are delivered to (but not displayed on) WEA-enabled devices.[155] CSRIC IV concluded that a localized test to opt-in participants' WEA-enabled devices would achieve alert originators' goals of providing system verification, as well as opportunities for alert originator proficiency training, and enhancing public awareness of the WEA service.[156]

46. Pursuant to CSRIC IV's recommended opt-in testing model, an alert originator would submit its test message to FEMA/IPAWS, which would then send the test message to Participating CMS Providers that have coverage within the described alert area.[157] Participating CMS Providers would then receive and process the test message, distributing it to devices configured to opt-in to receiving state and local WEA tests.[158] CSRIC IV's recommended end-to-end process flow for local, opt-in WEA testing is shown in *Figure 2* below.

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[150] *See* GOVERNMENT ACCOUNTABILITY OFFICE, EMERGENCY ALERTING: CAPABILITIES HAVE IMPROVED, BUT ADDITIONAL GUIDANCE AND TESTING ARE NEEDED, GAO 13-375 (2013); *CSRIC WEA Testing Report* at 7.

[151] *See* LARISSA HERDA, CSRIC IV WORKING GROUP DESCRIPTIONS AND LEADERSHIP 2-3 (2014), *available at* http://transition.fcc.gov/bureaus/pshs/advisory/csric4/CSRIC%20IV%20Working%20Group%20Descriptions%2010%2023%2014.pdf (last visited Oct. 2, 2015).

[152] *CSRIC WEA Testing Report* at 7, 9.

[153] *See id.* at 7; *see also WEA Mobile Penetration Strategy* at 120 (stating that "awareness and understanding of WEA is low, especially among local" emergency managers).

[154] *See id.* at 22, Appendix E (allow alert originators to utilize the current RMT process); *id.* at 24, Appendix E (alerting authorities conduct WEA test to opt-in participants); *id.* at 27, Appendix E (alerting authorities conduct WEA test to opt-out participants).

[155] *See id.* at 22, Appendix E.

[156] *See id.* at 15; *see also WEA Mobile Penetration Strategy* at 131 (recommending end-to-end WEA testing to promote opportunities for system verification and public awareness).

[157] *See CSRIC WEA Testing Report* at 24.

[158] *See id.* at 24-25 (including further details of CSRIC IV's recommended model for localized, end-to-end, WEA testing).

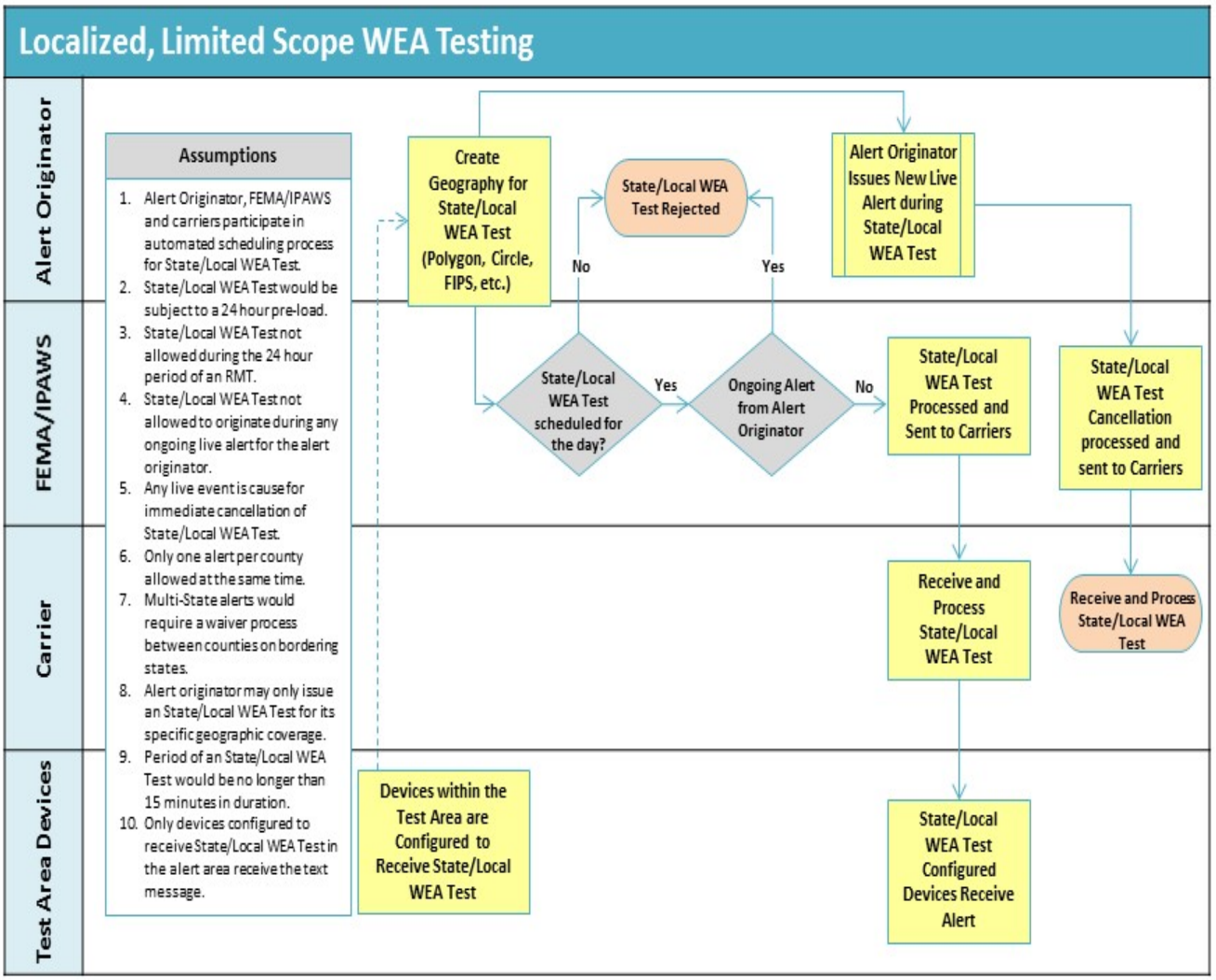

Figure 2*: *Process for Alerting Authorities to Conduct WEA Testing with Opt-in Participants[159]

47. We propose to add a new Section 10.350(c) to the WEA rules to require Participating CMS Providers to ensure their systems support the receipt of "State/Local WEA Tests" from the Federal Alert Gateway Administrator, and to distribute such tests to the desired test area in a manner consistent with Section 10.450 of the rules.[160] In order to allow State/Local WEA Tests to mirror an actual event, as

[159] The data in this table is based on the diagram provided by the *CSRIC WEA Testing Report*. *Id.* at 24. While the assumptions in this diagram suggest State/Local WEA tests would be subject to a 24-hour window for delivery, we propose that State/Local WEA tests be delivered upon receipt, as discussed below.

[160] 47 C.F.R. § 10.450 (establishing our current minimum requirement for the geographic targeting of alert messages that "[a] Participating CMS Provider must transmit any Alert Message that is specified by a geocode, circle, or (continued….)

recommended by the CSRIC,[161] we propose that the 24-hour delivery window that currently applies to RMTs under Section 10.350(a)(2) would not apply to State/Local WEA Tests conducted under proposed Section 10.350(c). We believe that the local, geographically focused nature of these tests would allow Participating CMS Providers to distribute the State/Local WEA Tests within their networks upon receipt in a manner consistent with necessary traffic load management and network maintenance. We seek comment on this analysis. In this regard, we also seek comment on whether there still remains a justification for the 24-hour window for RMTs. Does the 24-hour window allow for efficient testing that provides adequate data about any weaknesses in the system, including potential message delivery latencies? Do Participating CMS Providers still require a 24-hour window "to manage traffic loads and to accommodate maintenance windows," as indicated by Section 10.350(a)(2)? We further propose that Section 10.350(c), consistent with Section 10.350(a), should specify that a Participating CMS Provider may forgo accepting or delivering a State/Local WEA Test if the test message is preempted by actual alert traffic, or if an unforeseen condition in the Participating CMS Provider infrastructure precludes distribution of the State/Local WEA Test.[162] In the event that a Participating CMS Provider cannot accept or deliver a test under these circumstances, we propose to require that Participating CMS Providers shall indicate such an unforeseen condition by sending a response code to the Federal Alert Gateway. Finally, we propose that Section 10.350(c) state that Participating CMS Providers may provide their subscribers with the option to opt-in to receiving State/Local WEA Tests. We seek comment on these proposals.[163] We also seek comment on whether we should require State/Local WEA Test messages to be clearly identified as test messages to prevent confusion.

48. We seek comment on whether any new or revised technical standards or processes would be necessary to facilitate state and local testing, and if so, whether such standards would be best developed through industry standards bodies or best practices. We seek further comment on whether alert originators at the federal, state and local levels would be best positioned to coordinate with Participating CMS Providers and determine the proper method of outreach to testing participants. Accordingly, would our goal of promoting alert origination proficiency be best achieved by affording alert originators flexibility to develop a WEA testing model that best fits the needs of their individual communities? Similarly, would industry organizations such as ATIS/TIA be best positioned to create the device and network specifications that may be necessary to support state and local WEA testing? We seek comment on whether any additional requirements would be necessary to realize the specific opt-in testing regime recommended by CSRIC IV.[164] Should we revise section 10.500 of the WEA rules, which specifies

(Continued from previous page)
polygon to an area not larger than the provider's approximation of coverage for the Counties or County Equivalents with which that geocode, circle, or polygon intersects. If, however, the propagation area of a provider's transmission site exceeds a single County or County Equivalent, a Participating CMS Provider may transmit an Alert Message to an area not exceeding the propagation area."). We propose to revise this requirement as specified in Section III(B) above. *See supra* § III.B.

[161] *See CSRIC WEA Testing Report* at 24-25.

[162] 47 C.F.R. § 10.350(a) (describing RMTs).

[163] In proposing to adopt rules to facilitate State/Local WEA Testing, we address CSRIC IV's recommendation that the Commission clarify that WEA end-to-end testing beyond the RMT is not precluded by any of its existing rules, and that the Commission grant a waiver of its Part 10 rules to the extent necessary to allow state and local testing of WEA to begin immediately in light of the critical need for this service. *See CSRIC WEA Testing Report* at 16. While Section 10.350 of the WEA rules specifies that RMT and C-Interface testing are required, it does not prohibit other testing from being undertaken voluntarily. 47 C.F.R. § 10.350. Accordingly, no waiver is necessary to permit state and local alert originators, FEMA/IPAWS, and Participating CMS Providers to agree to deliver state and local WEA tests on a voluntary basis during the pendency of this rulemaking.

[164] CSRIC IV states that "any change to existing testing procedures would need a review of the effects of the solutions upon" standards and documents governing the performance and operation of mobile devices, the C-Interface, Participating CMS Provider networks. *See CSRIC WEA Testing Report* at 14.

general requirements for WEA mobile device functionality (including monitoring for alert messages and presenting alert content) to include the ability to monitor for State/Local WEA Tests and to be able to receive and display State/Local WEA Test messages?[165]

49. We also seek comment on the periodicity with which state and local alert originators would likely want to engage in readiness testing, and on the maximum readiness testing periodicity Participating CMS Providers are able to support. With what frequency should State/Local WEA Tests be conducted, in order to optimize and ensure system readiness, without introducing alert fatigue or otherwise imposing undue burdens on Participating CMS Providers?

50. We seek comment on the public safety benefits likely to result from requiring Participating CMS Providers to support State/Local WEA Testing. According to FEMA, a localized, opt-in, end-to-end approach to testing, as described above, offers the public safety benefits that alert originators state that they need.[166] Specifically, FEMA asserts that requiring Participating CMS Provider support for local testing would improve WEA by (1) demonstrating to the public that their handsets are (or are not) capable of receiving a WEA message; (2) demonstrating WEA capability in coordinated public warning exercises and tests such as those required by the Nuclear Regulatory Commission for local emergency preparedness programs; and (3) providing the public with reassurance that local emergency management is capable of alerting them in times of disaster.[167] We seek comment on FEMA's analysis.

51. Alternatively, would another approach to state and local WEA testing address alert originators' needs more efficiently? As mentioned above, CSRIC IV considered two alternatives to localized, end-to-end, opt-in WEA testing, including local testing on an opt-out basis, and using the current RMT process.[168] We seek comment on these alternative testing regimes. While CSRIC IV concludes that opt-out testing would afford substantial benefits in terms of system verification, alert originator proficiency, and public awareness, it also finds that opt-out testing is unnecessarily broad, and that large-scale public response may unduly stress emergency call centers.[169] We seek comment on CSRIC IV's analysis. With respect to utilizing the current RMT process, CSRIC IV finds that this testing model poses little to no network reliability risk for Participating CMS Providers, but also offers little, if any, benefit in the areas of system verification, alert originator proficiency and public awareness because the test alert would not be displayed on end-user devices.[170] We seek comment on CSRIC IV's findings.

52. We also seek comment on any potential costs that may be imposed by our proposed testing requirements. Because the proposed testing regime is largely based on the current RMT model, with test recipients likely comprised of a limited number of voluntary, opt-in participants, we anticipate that the proposed testing regime would likely not lead to network congestion. We seek comment on this observation, as well as the extent to which Participating CMS Providers would incur costs, including costs related to the development of any technical standards or necessary modifications to end user devices. Are there any measures we could take to minimize any attendant costs while still achieving our public safety goals?

[165] 47 C.F.R. § 10.500 (containing general requirements for WEA mobile device functionality, including that the device be able to authenticate interactions with Participating CMS Provider infrastructure, monitor for alert messages, maintain subscriber opt outs, maintain language preferences, extract alert content, present alert content, and detect and suppress duplicate alerts).

[166] *See* FEMA Jun. 18, *Ex Parte* Letter at 3.

[167] *See id.*

[168] *See supra* ¶ 45.

[169] *See CSRIC WEA Testing Report* at 28.

[170] *See id.* at 22.

53. *Liability Protection for State/Local WEA Testing*. Finally, CSRIC IV recommends that the Commission confirm that liability protection provided under the WARN Act extends to Participating CMS Providers for their engagement in State/Local WEA Testing.[171] Based on the plain language of the WARN Act, we believe that liability protection would reasonably extend to Participating CMS Provider engagement in State/Local WEA Testing as proposed in this Notice, provided that the Participating CMS Provider otherwise satisfies its obligations under the WARN Act and complies with our testing requirements.[172] We note that Section 602(f) provides that "[t]he Commission shall require by regulation technical testing for commercial mobile radio service providers that elect to transmit emergency alerts and for devices and equipment used by such providers for transmitting alerts.[173] Further, Section 602(e)(1)(A) states that "[a]ny commercial mobile service provider [. . .] that transmits emergency alerts and meets its obligations under this title shall not be liable to any subscriber, or user of, such person's service or equipment for – (A) any act or omission related to or any harm resulting from the transmission of, or failure to transmit, an emergency alert."[174] We seek comment on our analysis.

54. *Proficiency Training*. We observe that it may be helpful for state and local alert originators to send WEA test messages in the context of proficiency training exercises. We envision that proficiency training exercises would help develop the preparedness of state and local emergency response, ensuring that emergency managers are able to respond swiftly and efficiently to emergencies through the use of WEA. We seek comment on whether we should provide alert originators with the option of delivering such proficiency training messages to a single, dedicated end-user device, such as the mobile device of an emergency management official, rather than to a larger set of wireless customers, in order to provide alert originators with an opportunity to develop alert originator proficiency through regular exercises without involving the general public. Further, in order to minimize any potential burden on Participating CMS Providers, we propose that proficiency training exercises would not be subject to the same reporting requirements that we discuss below. We seek comment on this proposal, and any other approaches we could adopt that would achieve our public safety objectives.

2. Requiring Alert Logging and Test Reporting

55. Section 10.350 of the WEA rules requires Participating CMS Providers to keep an automated log of RMT messages received by the Participating CMS Provider Alert Gateway from the FEMA Alert Gateway.[175] The Commission adopted this requirement in the *Second Report and Order* based on the CMSAAC's recommendation that alert logs should be kept and preserved as an integral part of the Trust Model for maintaining WEA system integrity, for protecting system security, and for testing and troubleshooting purposes.[176] The Commission declined to adopt more specific test reporting requirements at that time because the WEA system was still in a nascent stage.[177] According to CSRIC IV, there is no established procedure for Participating CMS Providers to inform alert originators or government entities of the success or failure of WEA tests under the current WEA testing model (*i.e.*, RMT and C-Interface Testing),[178] and thus no available method to analyze these results in the interest of public safety. We seek comment on CSRIC IV's conclusions.

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[171] *See id.* at 12.

[172] WARN Act § 602(e)(1).

[173] *Id.* at § 602(f).

[174] *Id.* at § 602(e)(1)(A).

[175] 47 C.F.R. § 10.350(a)(7).

[176] *WEA Second Report and Order*, 23 FCC Rcd at 10774, ¶ 23; *see also CMSAAC Report* at 66.

[177] *See WEA Second Report and Order*, 23 FCC Rcd at 10774, ¶ 23.

[178] *See CSRIC WEA Testing Report* at 16.

56. We propose to require Participating CMS Provider Alert Gateways to provide the logging functionality recommended by the *CMSAAC Report*.[179] Specifically, we propose to adopt a new Section 10.320(g) that would require Participating CMS Provider Alert Gateways to:

- Provide a mechanism to log messages with time stamps that verify when messages are received, and when the messages are acknowledged or rejected by the Participating CMS Provider Alert Gateway, and if an alert is rejected, to provide the specific error code generated by the rejection;
- Maintain an online log of active and cancelled alert messages for 90 days, and maintain archived logs for at least 36 months that should be accessible by Participating CMS Providers for testing and troubleshooting purposes; and
- Generate monthly system and performance statistics reports based on category of alert, alert originator, alert area, and other alerting attributes.

We observe that these logging requirements were recommended by the CMSAAC after extensive efforts to arrive at a consensus among CMS Providers, vendors, public safety entities, organizations representing broadcast stations, and organizations representing people with disabilities and the elderly.[180] Are Participating CMS Provider Alert Gateways currently capable of performing the logging functions specified by the CMSAAC? If not, how difficult would it be to add this functionality? Would alert logging allow Participating CMS Providers to monitor whether the WEA system is working as intended? In order to develop a full view of how the WEA system is working, from alert initiation all the way through to receipt of the message by the mobile device, should CMS Providers also log when the alert is received by a representative, dedicated, end-user device (such as a mobile device controlled by and in the possession of the Participating CMS Provider)? Aside from the Commission, should alert logs be accessible only by Participating CMS Providers? We seek comment on whether other federal or state governmental entities, such as FEMA, may have a legitimate need for access to alert logs. We seek comment any confidentiality protections that would be required to protect Participating CMS Provider alert logs. The CMSAAC described message logging as part of the Trust Model necessary to ensure WEA system security and reliability because it allows all WEA messages to be attributed reliably to an individual, sender, and to identify when the sender is not properly credentialed.[181] We also seek comment on whether implementing these CMSAAC-recommended procedures, along with the test reporting requirements described below, would be beneficial in harmonizing our proposed WEA test reporting and logging procedures with our EAS rules.[182]

57. We note that CSRIC IV recommends that industry and government stakeholders "develop a best practices ATIS/TIA standard for defining and reporting on significant problems."[183] We seek comment on CSRIC IV's recommendation. Should we formalize a reporting process for alert originators? If we do formalize a test reporting procedure, what form should that reporting take, and what specific information should be reported? We also seek comment on the extent to which reporting procedures could provide alert originators with useful feedback on alert delivery latency,[184] accuracy of

[179] *See CMSAAC Report* at 66.

[180] WARN Act § 602(a); *see also CMSAAC Report* at 63; *First Report and Order*, 23 FCC Rcd at 6151, ¶ 13.

[181] *See CMSAAC Report* at 62.

[182] *See id.* at 66; *see also* 47 C.F.R. § 11.35 (requiring EAS Participants to "determine the cause of any failure to receive . . . required tests or activations," indicating reasons why a test was not received in a log, and requiring such a log to be maintained for two years); 47 C.F.R. § 11.61(3)(iv) (requiring EAS Participants to log tests results in the Electronic Test Reporting System (ETRS)).

[183] *CSRIC WEA Testing Report* at 16.

[184] "Latency refers to several types of delays typically incurred during network data processing, and is typically measured in milliseconds (ms)." *2014 Competition Report* at 15412, ¶ 204. "One common measure is round-trip (continued….)

geo-targeting, and quality of public response that otherwise would be unavailable. Could feedback on the quality of public response be leveraged to improve alert originators' alert origination proficiency? We seek comment on the extent to which reported data would be useful to empower alert originators with the ability to ensure the WEA system will work as designed and when needed. What, if any, characteristics of alert dissemination, beyond geo-targeting and latency, would state and local alert originators seek to evaluate through State/Local WEA Testing and thus require reports on? How can a test reporting system be optimized to protect potentially confidential information?

58. Should we also require Participating CMS Providers to report WEA test data? We note that the Commission has required that EAS Participants file nationwide EAS test result data with the Commission on a confidential basis through an Electronic Test Reporting System (ETRS).[185] Should the Commission require Participating CMS Providers to use this system as a model for the reporting of WEA test data to the Commission? If we were to require reporting of WEA test data, we seek comment regarding the frequency with which such reporting should take place. For example, should Participating CMS Providers file test data on an annual basis, based on test data collected from the RMT process? We also seek comment regarding the elements of the test data that should be provided in any such report. For example, should the report include data regarding the time of the receipt of the alert from the FEMA Alert Gateway, and the time of alert transmission? Should Participating CMS Providers include data regarding when an alert is received by a representative mobile device, as discussed above with respect to logging requirements? We also seek comment on whether such information should be considered presumptively confidential, to be shared with federal, state and local alert originators that have confidentiality protection at least equal to that provided by the Freedom of Information Act (FOIA), consistent with our data-protection practices in the EAS context.[186] Alternatively, are there differences in the type of data that we might collect from CMS Providers versus EAS Participants that would suggest WEA test data should be treated differently? Should access to WEA test data be limited, and if so, to whom? We seek comment on the optimal method of filing test result data with the Commission in a manner that fulfills the primary goal of WEA testing to provide alert originators with verification that the system works as designed, and provides the Commission with an opportunity to analyze the performance of the WEA system in order to bring to light any potential weaknesses in the WEA system that we may be able to address through rulemaking, public-private partnerships, or both.

59. We also seek comment on three alternative test reporting mechanisms: third-party software using Application Programming Interfaces (APIs),[187] informal communication among alert originators, and use of the Public Safety Help Center. We anticipate that these alternatives could minimize the filing burden on Participating CMS Providers, but could also present significant drawbacks. First, we seek comment on whether Participating CMS Providers could allow third-party application developers to create software and APIs to satisfy their test reporting requirements. Could third-party software be designed to automate the process of filing test result data with the Commission by sending such data from the consumer's mobile device directly to a Commission-operated server or account using a

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latency, which measures the amount of time it takes a data packet to travel from a source to a destination and back." *Id*. "Latency is often affected by factors such as the specifics of the cellular network architecture or processing delays that may occur when the packets need to pass through proxy servers." *Id*. 4G networks significantly reduce latency relative to earlier network technologies. *See id*.

[185] *See Sixth Report and Order*, 30 FCC Rcd at 6533, ¶ 27.

[186] *See* 5 U.S.C. § 552 (2006), amended by OPEN Government Act of 2007, Pub. L. No. 110-175, 121 Stat. 2524 (stating the FOIA confidentiality standard, along with relevant exemptions); *see also Sixth Report and Order*, 30 FCC Rcd at 6533, n.90 (requiring federal, state and local entities to have confidentiality protections at least as strong as FOIA in order to receive test result data filed in ETRS).

[187] APIs provide a way to connect computer software components and make it possible for organizations to open their backend data and functionality for reuse in new application services. *See* API ACADEMY, http://www.apiacademy.co/lessons/api-strategy/what-api (last visited May 14, 2014).

the cell broadcast network, a data connection, or WiFi? Second, we seek comment on whether it would be preferable to leave test reporting to person-to-person interaction without the adoption of formal rules. Could the goals of test reporting be achieved through informal communication between alert originators and their associates? Finally, we seek comment on the use of the Public Safety Answering Point (PSAP) section of the Public Safety Help Center to satisfy the need for feedback on State/Local WEA Tests. Would a consumer-complaint based reporting mechanism adequately capture shortcomings in State/Local WEA Tests?

60. We also seek comment on the potential costs that Participating CMS Providers would be likely to incur if we were to adopt rules for alert logging and test reporting. What costs, if any, would logging alerts at the Participating CMS Provider Alert Gateway cause Participating CMS Providers to incur? What costs would reporting test data to the Commission impose? How could we optimize the WEA test reporting process to minimize the filing burden on Participating CMS Providers, and to protect confidential information? How, if at all, could a best-practice-based test reporting system be leveraged to provide comparable benefits at a lower cost?

D. Participating CMS Providers and Subscribers

61. We seek comment on whether there are additional measures we can take to promote participation in WEA, both by consumers and by CMS Providers.[188] Section 602(b)(2)(E) of the WARN Act provides that "any commercial mobile service licensee electing to transmit emergency alerts may offer subscribers the capability of preventing the subscriber's device from receiving such alerts, or classes of such alerts, other than an alert issued by the President."[189] In the *Third Report and Order*, the Commission addressed this section of the WARN Act by adopting section 10.280 of the WEA rules, which states that Participating CMS Providers "may provide their subscribers with the option to opt out of both, or either, the 'Child Abduction Emergency/AMBER Alert' and 'Imminent Threat Alert' classes of Alert Messages,"[190] and that Participating CMS Providers "shall provide their subscribers with a clear indication of what each option means, and provide examples of the types of messages the customer may not receive as a result of opting out."[191] The Commission also allowed Participating CMS Providers the flexibility to provide opt-out choices consistent with their own infrastructure in order to accommodate variations among Participating CMS Provider networks and devices.[192] The Commission reasoned that this approach would allow consumers the flexibility to choose what type of messages they wish to receive, while also ensuring that customers would be apprised of the most severe threats as communicated by Presidential Alert messages.[193] Further, the Commission reasoned that this approach would accommodate "differences in how CMS providers and device manufacturers provision menus and user interfaces."[194] The Commission's approach was consistent with the CMSAAC recommendation that a simple opt-out program should allow consumers the choice to opt out of Imminent Threat Alerts and AMBER Alerts.[195]

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[188] *See WEA Mobile Penetration Strategy* at 120, 128 (stating that the rate of WEA adoption among is lowest among the smallest CMS Providers); *see also id.* at 123 (projecting that, by 2016, the rate of mobile device penetration will be ninety percent, or about 260 million devices); *id.* at 125 ("User acceptance of WEA is an important consideration in ensuring the overall effectiveness of the system").

[189] WARN Act § 602(b)(2)(E).

[190] *Third Report and Order*, 23 FCC Rcd at 12578, ¶ 41; 47 C.F.R. § 10.280.

[191] *Id.*

[192] *See Third Report and Order*, 23 FCC Rcd at 12578, ¶ 41.

[193] *See id*. Pursuant to the WARN Act, consumers cannot opt out of receiving Presidential Alerts. WARN Act § 602(b)(2)(E); *see also* 47 C.F.R. § 10.280.

[194] *Third Report and Order*, 23 FCC Rcd at 12578, ¶ 41.

[195] *See CMSAAC Report* at 52.

62. Section 602 (b)(2)(E) of the WARN Act required the Commission to send a report to Congress making recommendations on whether Participating CMS Providers should continue to be permitted to offer their subscribers the ability to opt out of receiving Imminent Threat and AMBER Alerts.[196] As required by the WARN Act, the Commission filed the report on August 5, 2010, but initial deployment of WEA was not scheduled until April 2012. Accordingly, although the Commission adopted opt-out rules in 2008, at the time the Commission submitted its report to Congress there was no WEA service from which customers could opt-out, so the Commission made no recommendations regarding subscriber opt-out capability.

63. Now that WEA has been deployed for over three years, we seek comment on the opt-out provisions currently used by Participating CMS Providers. Further, we seek comment on specific factors that lead consumers to opt out of receiving WEA messages.[197] For example, do consumers regularly opt out of receiving WEA messages because they receive alerts that are not relevant to their geographic location? If so, would the new geo-targeting rules we propose today reduce consumer opt-out? Has message length, particularly the 90-character limit, been a factor in consumer decisions to opt out? Would the provision of further details about the nature of life-threatening situations and instructions on how to respond make it more or less likely that consumers would choose to opt out of receiving WEA messages? Similarly, would the availability of WEA messages in languages other than English, Emergency Government Information, embedded URLs, embedded phone numbers or multimedia content have an impact on consumer opt out, and if so, then to what extent?

64. We note that many Participating CMS Providers supply, display, or refer the customer to instructions on how to opt out of receiving WEA messages on Participating CMS Provider web sites.[198] Does the manner in which Participating CMS Providers offer their customers information regarding consumer choice have an impact on whether consumers opt out of receiving WEA messages? Would the goals of the statute be better served by requiring a more neutral approach? If so, should the Commission prescribe a consistent, transparent and uniform opt-out procedure for WEA messages, or are there other regulatory responses that would effectively prevent such favoritism while providing Participating CMS Providers with more flexibility in how they inform consumers of the options?

65. We seek comment on the extent to which Participating CMS Providers can provide consumers with a greater number of opt-out choices that might facilitate consumer participation in WEA. For example, could Participating CMS Providers offer users the option to receive AMBER Alerts only during certain times, such as during the day, so they will not be disturbed during the evening or at night? Are consumers currently able to silence some or all WEA alerts by using "silent mode" or "do not disturb" functions on their mobile devices?[199] Are there other ways to personalize alert receipt options that would help optimize the balance between encouraging WEA participation and providing consumers

[196] WARN Act § 602(b)(2)(E).

[197] *See WEA Mobile Penetration Strategy* at 126 (stating that "[i]f users find the content and structure of WEA messages to be confusing, they may decide to opt out of the system").

[198] *See, e.g.*, AT&T WIRELESS SUPPORT, http://www.att.com/esupport/article.jsp?&sid=KB410692&cv=820 (last visited Jun. 12, 2015); VERIZON, OTHER WIRELESS TOPICS, http://www.verizonwireless.com/support/wireless-emergency-alerts-faqs/ (last visited Jun. 12, 2015).

[199] *See* CTIA, WIRELESS EMERGENCY ALERTS, http://www.ctia.org/your-wireless-life/consumer-tips/wireless-emergency-alerts (last visited Oct. 20, 2015) ("If your phone is on silent or vibrate only, you will receive the alert, but will not get the WEA sound"); IPHONE USER GUIDE FOR IOS 8.4 SOFTWARE 14 (2015), *available at* https://manuals.info.apple.com/MANUALS/1000/MA1565/en_US/iphone_user_guide.pdf ("You can also silence, calls, alerts, and notifications using Do Not Disturb."); HTC ONE (M8) USER GUIDE 175 (2014) ("Use Do not disturb mode to reject calls, and silence audible alerts and notifications"); *but see* dcd00d, iPhone Amber Alerts Discussion, REDDIT ("WEA messages do respect the silent switch but ignore 'Do Not Disturb' mode"); *Amber Alert Woke Me Up Despite "Do Not Disturb" Setting*, APPLE SUPPORT COMMUNITIES (Mar. 23, 2014, 5:16 PM), https://discussions.apple.com/thread/5219951?tstart=0.

with sufficient information to make an informed opt out decision? Should the Commission require Participating CMS Providers to offer any of these types of personalized alert receipt options, and, if so, what costs, if any, would such a requirement impose on the Provider? What benefits would be associated with such a requirement? For example, would a greater number of consumers decide not to disassociate completely from WEA if they had a more nuanced range of choices in how they could receive alerts, such as having the option to cache certain types of alerts received during the evening or night for later delivery during a more convenient time, or to limit the types of weather alerts they would receive, for example, to tornadoes but not thunderstorms?

66. We seek comment on the extent that public perception of WEA contributes to consumer opt-out and to CMS Provider election to participate in WEA. To the extent that the rules we propose today will heighten public awareness and improve public perception of the value of WEA, to what extent is this expected to affect consumer opt out and CMS Provider participation?

67. Finally, we seek comment on what potential barriers may exist that prevent full participation in WEA by all wireless providers, particularly any barriers confronting smaller providers. What measures could lower any barriers to participation for CMS Providers? Are there particular actions the Commission or other stakeholders could take to facilitate the voluntary participation of non-participating CMS providers, particularly smaller providers, in WEA? For instance, do smaller providers encounter issues obtaining WEA-capable devices?

E. WEA Attention Signals and Public Service Announcements

68. Section 11.45 of our EAS rules provides, in pertinent part, that "[n]o person may transmit or cause to transmit the EAS codes or Attention Signal, or a recording or simulation thereof, in any circumstance other than in an actual National, State or Local Area emergency or authorized test of the EAS."[200] While our WEA rules do not include a comparable bar against the use of the WEA Attention Signal,[201] because the WEA and EAS Attention Signals use identical frequencies,[202] absent a waiver of our rules, the broadcast or transmission of the WEA Attention Signal may violate Section 11.45 of the Commission's rules, particularly insofar as the respective signals may be indistinguishable to the listener.[203]

69. FEMA, in collaboration with Ready.gov and the Ad Council, has developed a public education campaign consisting of PSAs, which it has distributed to strategic local markets and state and local IPAWS partners.[204] In November 2015, the Public Safety and Homeland Security Bureau (PSHSB or Bureau), on delegated authority, temporarily waived Sections 11.45 and 10.520 of the Commission's rules,[205] in order to allow FEMA to raise public awareness about WEA and its attention signal through a

[200] 47 C.F.R. § 11.45.

[201] 47 C.F.R. § 10.520(d) ("[The WEA] audio attention signal must be restricted to use for Alert Messages under Part 10.").

[202] *Compare* 47 C.F.R. § 10.520(b) *with* 47 C.F.R. § 11.31(a)(2) (stating that both the WEA and EAS attention signals are consist of the fundamental frequencies of 852 Hz and 960 Hz transmitted simultaneously).

[203] For example, a casual listener may mistake hearing a broadcast of the WEA Attention Signal in the FEMA PSA as an actual EAS alert, or advertisers might think that they could avoid the prohibition against using the EAS Attention Signal by claiming that they are using the WEA Attention Signal instead. *See* Waiver of Section 11.45 of the Commission's Rules To Allow Broadcast of Public Service Announcements Produced by the Federal Emergency Management Agency to Educate the Public on the Wireless Emergency Alert System, PS Docket No. 07-287, *Order*, DA 15-1326,¶ 4 (2015).

[204] *See* Letter from Roger L. Stone. Assistant Administrator (Acting) National Continuity Programs, Federal Emergency Management Agency, to David Simpson, Chief, Public Safety and Homeland Security Bureau, FCC (dated Nov. 6, 2015) (*FEMA Letter, Nov. 6, 2015*).

[205] 47 C.F.R. §§ 11.45 and 10.520.

PSA campaign.[206] The waiver, which will expire on May 19, 2017, permits the PSAs to play the WEA Attention Signal to familiarize the public with the sounds that they may hear from their mobile device when they receive a WEA Alert.[207] The Bureau, however, conditioned the waiver upon the WEA PSA making clear that the WEA Attention Signal was being used "in the context of the PSA and for the purpose of educating the viewing or listening public about the functions of their WEA-capable mobile devices and the WEA program."[208]

70. We propose to amend our rules to allow broadcast or transmission of the WEA Attention Signal as part of government-developed PSAs in order to address alert originators' need to raise public awareness about WEA.[209] Specifically, we propose to amend Sections 11.45 and 10.520 to allow federal, state and local governments to use the attention signal common to EAS and WEA to raise public awareness about WEA, provided the relevant entity makes it clear that the WEA Attention Signal is being used in the context of the PSA, "and for the purpose of educating the viewing or listening public about the functions of their WEA-capable mobile devices and the WEA program," including by explicitly stating that the WEA attention signal is being used in the context of a PSA for the purpose of educating the public about WEA.[210] We also seek comment on whether we should further amend Section 10.520 to bar the use of the WEA Attention Signal in a manner parallel to the bar on use of the EAS Attention Signal in Section 11.45 of the Commission's rules.[211] In the context of increasing the maximum WEA character limit, FEMA notes that it will "need to . . . conduct additional public information efforts to inform people of the new format of WEA messages they may receive on their cellular phones."[212] Would PSAs be useful for this purpose? If we were to amend our rules to allow the broadcast or transmission of the WEA Attention Signal in PSAs intended to educate the public about WEA, should we limit this exception to PSAs that are developed by FEMA, or should we extend this exception to PSAs created by any alerting authority recognized by FEMA? If we were to extend the exception in this manner, should any such PSAs be subject to prior review or approval by FEMA as a condition of being considered compliant under our amended rules?

F. Non-commercial Educational and Public Broadcast Television Station Testing

71. The WARN Act and the Commission's rules require Non-commercial Educational (NCE) and public broadcast television station licensees and permittees "to install necessary equipment and technologies on, or as part of, any broadcast television digital signal transmitter to enable the distribution of geographically targeted alerts by commercial mobile service providers that have elected to transmit emergency alerts" as a back-up to the C-Interface.[213]

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[206] Waiver of Section 11.45 of the Commission's Rules to Allow Broadcast of Public Service Announcements Produced by the Federal Emergency Management Agency to Educate the Public on the Wireless Emergency Alert System, PS Docket No. 07-287, *Order*, DA 15-1326, ¶ 6 (2015).

[207] *See id.* at ¶ 9.

[208] *Id.* at ¶ 8.

[209] *See CSRIC WEA Testing Report* at 9 (concluding that raising public awareness is among the primary reasons that emergency managers desire testing).

[210] Waiver of Section 11.45 of the Commission's Rules to Allow Broadcast of Public Service Announcements Produced by the Federal Emergency Management Agency to Educate the Public on the Wireless Emergency Alert System, PS Docket No. 07-287, *Order*, DA 15-1326,¶ 8 (2015).

[211] 47 C.F.R. § 11.45 ("No person may transmit or cause to transmit the EAS codes or Attention Signal, or a recording or simulation thereof, in any circumstance other than in an actual National, State or Local Area emergency or authorized test of the EAS.").

[212] FEMA Jun. 18 *Ex Parte* Letter at 1.

[213] WARN Act § 602(c); *see also* 47 C.F.R. § 10.340.

72. In a companion *Further Notice of Proposed Rulemaking (Further Notice)* to the *Second Report and Order*,[214] the Commission sought comment on whether it should adopt rules that require NCE and public broadcast television station licensees and permittees to test the installed equipment.[215] In the *Further Notice*, the Commission noted that NCE and public broadcast television station licensees and permittees will, in essence, provide a redundant path by which Participating CMS Providers will be able to receive geo-targeted alerts.[216] The Commission also noted that it adopted rules to implement 602(f) of the WARN Act to require technical testing of this back-up path for Participating CMS Providers.[217]

73. Against that background, the Commission sought comment on whether NCE/public broadcast television stations should participate in WEA testing, and if so, how this testing should be implemented.[218] The Commission asked whether it should implement similar requirements as those it adopted for Participating CMS Providers.[219] Additionally, the Commission sought comment on whether a different testing regime should be implemented given the unique circumstances of NCE/public broadcast television stations and digital television technology.[220] Only two parties commented in response, both of which noted that, although they supported testing of the NCE/public television portion of the system, there were inherent limits in what such testing would show.[221]

74. Given the passage of time, and the advances in WEA technology that have occurred during that time,[222] we ask that interested parties refresh and update the record on whether and how testing of the broadcast-based WEA infrastructure should be implemented. We also seek comment on whether NCE/public broadcast television stations have the capability to test and analyze the transport of messages, and if not, would they be required to purchase testing equipment? Would special procedures and test signals need to be developed to NCE/public broadcast television stations to effectively test message transmission and diagnose delivery problems? Additionally, how would NCE/public broadcast television stations report problems? As an alternative, would it be sufficient to require NCE/public broadcast television stations to simply receive tests originated by the Federal Alert Gateway and re-transmit them to the CMS Provider Alert Gateway?

75. Additionally, we ask commenters to specify the benefits and costs of adopting NCE/public broadcast television station testing requirements. For example, would the public benefits associated with ensuring the reliability of a redundant, back-up system outweigh the costs to NCE and public broadcast station licensees and permittees in testing equipment? Would an extended implementation timeframe mitigate such costs?

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[214] *Second Report and Order*, 23 FCC Rcd at 10771-72, ¶¶ 13-16.

[215] *Id.* at 10775, ¶ 24.

[216] *Id.* at 10776, ¶ 25.

[217] *See id.* at 10775, ¶ 24.

[218] *See id.* at 10776, ¶ 25.

[219] *See id.*

[220] *See id.*

[221] *See* Comments of the Association of Public Television Stations (APTS) to the CMAS Second Report and Order and Notice of Proposed Rulemaking at 2 (NCE/public broadcast stations play a passive, automatic role in the CMAS and so do not have the ability to actively test the CMAS); Comments of the University of North Carolina to the CMAS Second Report and Order and Notice of Proposed Rulemaking at 2 (NCE stations are passive participants that do not have return-path capability by which to report test, nor do they have any way to know whether a test was received at the CMS Provider Gateway end point).

[222] We observe that PBS has since initiated the "WARN" project, which provides Participating CMS Providers with a redundant path for the delivery of geo-targeted WEA alerts. *See* THE PBS WARN PROJECT, http://www.pbs.org/about/contact-us/warn/ (last accessed Oct. 27, 2015).

G. WEA Prioritization

76. Section 10.410 of the Commission's WEA rules requires Participating CMS Providers' Alert Gateways to process alerts on a first in-first out (FIFO) basis, except for Presidential Alerts, which must be processed before all non-Presidential alerts.[223] Section 10.320 reiterates this requirement, and further requires Participating CMS Provider's Alert Gateways to support "a mechanism to manage congestion within the CMS provider's infrastructure."[224] Further, in the *First Report and Order*, the Commission concluded that "it would be contrary to the public interest if alert messages were to preempt certain active voice or data sessions," observing that it would not be in the public interest if urgent calls for help during crises were preempted by alert traffic.[225] This conclusion was consistent with the recommendations of the CMSAAC, which stated that "the presentation of the received [ ] alert message should take priority over other mobile device functions except for the preemption of an active voice or data session."[226]

77. Given the passage of time, and the advances in WEA technology that have occurred during that time, we seek comment on whether we should amend Section 10.320 of the Commission's rules to address prioritization at the Alert Gateway, in transit, and on the mobile device. Specifically, with respect to prioritization at the Alert Gateway, we seek comment on whether WEA alerts should continue to be processed on a FIFO basis, with the exception of the Presidential Alert? Should Imminent Threat Alerts attaining a certain threshold level of urgency, severity and certainty be processed before other, less extreme Imminent Threats potentially affecting the same geographic area?[227] In the event commenters believe a particular type of alert should be prioritized over another, we seek comment on the order of prioritization and basis for such prioritization. With respect to the prioritization of WEA alerts in transit, should the Commission require that WEA alert data have priority over all other data in transit? Would this have any unintended practical consequences, given that all traffic is increasingly data?

H. Participating CMS Provider Election Process

78. The Commission's WEA rules allow Participating CMS Providers to elect to transmit WEA alert messages "in a manner consistent with the technical standards, protocols, procedures, and other technical requirements implemented by the Commission."[228] The WEA rules also allow Participating CMS Providers to withdraw their election to participate in WEA "without regulatory penalty or forfeiture."[229] The Commission adopted these rules based on the WARN Act's requirements that CMS providers that elect to transmit emergency alerts must agree to follow the technical rules adopted by the Commission,[230] and the WARN Act's provision that Participating CMS Providers may withdraw their election to transmit emergency alerts at any time without penalty upon written notification to subscribers.[231] CSRIC IV recommends that the Commission modify these election procedures to provide

[223] 47 C.F.R. §§ 10.410.

[224] 47 C.F.R. §§ 10.320(e)(3), (5); *see also* 47 C.F.R. § 10.410 ("A Participating CMS Provider is required to transmit Presidential Alerts upon receipt. Presidential Alerts preempt all other Alert Messages. A Participating CMS Provider is required to transmit Imminent Threat Alerts and AMBER Alerts on a first in–first out (FIFO) basis").

[225] *First Report and Order*, 23 FCC Rcd at 6173, ¶ 80.

[226] *CMSAAC Report* at 60.

[227] *See* 47 C.F.R. § 10.400(b) (stating that an "Imminent Threat Alert" is an alert that meets a minimum value for each of three CAP elements: "Urgency," "Severity" and "Certainty").

[228] 47 C.F.R. § 10.210(a)(1).

[229] 47 C.F.R. § 10.220.

[230] WARN Act § 602(b)(2)(B)(ii).

[231] *Id.* at § 602(b)(2)(D).

CMS Providers with multiple election options.[232] Under CSRIC IV's recommendations, a CMS Provider could elect to continue to participate in WEA under the new rules adopted by the Commission, or "under the rules in place at the time of the original election."[233] CSRIC IV recommends that CMS Providers should be required to electronically file with the Commission, within 180 days following the adoption of changes or enhancements to WEA rules, a letter attesting to the CMS Provider's election as recommended above.[234]

79. We believe that Participating CMS Providers should continue to provide WEA service in a manner consistent with our WEA rules, including any amendments we might adopt as a result of this proceeding. Under the WARN Act, CMS Provider election to participate in WEA is voluntary, but once a CMS provider elects to participate in WEA, participation must be consistent with the Commission's rules. The WARN Act plainly states that a CMS Provider that elects to transmit alerts under the WARN Act must do so "in a manner consistent with the technical standards, protocols, procedures, and other technical requirements implemented by the Commission."[235] There is nothing in the WARN Act that gives a Participating CMS Provider the authority to select which technical standards, protocols, procedures and other requirements with which it will comply. We observe that to allow each Participating CMS Provider to support a substantively or technically different WEA service could introduce confusion and potentially impede interoperability, unnecessarily complicating the task of alert originators at the very instant when lives may depend on getting an accurate and timely alert to the community. Moreover, if the Commission were to adopt CSRIC IV's recommended revisions to our election procedures, it would threaten to eliminate or severely inhibit the Commission's ability to implement the WARN Act's vision that the WEA service should evolve, consistent with advancements in the underlying technology.

80. We believe that the record and stakeholder practice support our position that the Commission should revisit its technical rules for WEA as technology evolves in order to ensure that WEA remains an effective, life-saving service.[236] It was the common understanding among all the CMSAAC stakeholders that WEA would evolve with technology.[237] Indeed, many of the proposals in this *Notice* are based upon the CMSAAC recommendations that were not adopted by the Commission in previous reports and orders because of technological limitations present at the time of their adoption. When the Commission adopted the WEA rules, it retained the "discretion and flexibility" to evaluate the CMSAAC's recommendations in order to advance the policy goal underlying the WARN Act, *i.e.*, "the creation of a [WEA system] in which CMS Providers will elect to participate, and which will effectively deliver alerts and warnings to the public."[238] We believe this is consistent with the intent of Congress.

[232] *See CSRIC WEA Messaging Report* at 48.

[233] *Id.* at 48-49. Under CSRIC IV's recommendations, CMS Providers' ability to withdraw their election, or elect not to participate remain the same. *Id*.

[234] *See id.* at 49.

[235] WARN Act § 602(b)(ii).

[236] *See, e.g.*, *CMSAAC Report* at 42 ("The CMSAAC recommends that this document be treated as a living document, with periodic updates to account for experiences with initial CMAS deployments and experiences with new technologies and their applicability to CMAS. An industry group consisting of government and industry stakeholders should be created after the CMSAAC's activity is complete to review and update this document on a periodic basis. This review should occur no less frequently than biennially.").

[237] *See id.* at 48 (stating that "[i]t is desired that more flexible geo-targeting to alert areas evolve as technology advances," and recommending that the geo-targeting to alert areas smaller than a county "should be reviewed as part of the biennial review process" they proscribed for WEA).

[238] *First Report and Order*, 24 FCC Rcd at 6148, ¶ 9.

81. In light of the rapid deployment of smart handsets and 4G technology as discussed above, we believe that the statutory provisions giving rise to WEA authorize the Commission to continue to take a leadership role, in cooperation with other federal entities, states, localities and Participating CMS Providers, to promote the continued effectiveness of WEA as a technologically current element of the nation's overall alerting strategy.[239] We also believe that competitive forces provide Participating CMS Providers with strong incentives to continue to transmit emergency alerts to consumer mobile devices and that these market incentives, along with the public safety benefits we expect to result from these proposed rules, provide a strong argument for continued participation in WEA. We seek comment on our analysis, as well as CSRIC IV's recommendation to allow Participating CMS Providers to offer WEA pursuant to different requirements.

I. Implementation Timeframe

82. As discussed below, we propose that Participating CMS Providers must comply with our WEA messaging rules within one year of their effective date, and with our WEA geo-targeting and testing rules within sixty days of their effective date. While all of our proposed rules are intended to leverage commercially available technologies to improve public safety at minimal cost to Participating CMS Providers, we recognize that compliance with our WEA messaging rules, unlike our WEA testing and geo-targeting rules, would likely require modifications to existing network and device standards in order to ensure that Participating CMS Providers are able to comply with these proposed rules in a uniform manner.

83. CSRIC IV recommends that "within 180 days of the FCC adoption of rules for WEA enhancements, the FCC, Participating CMS [P]roviders, FEMA, and Alert Originators jointly identify the timelines for enhanced WEA development, testing and deployment," taking into consideration ATIS/TIA feasibility studies scheduled to be completed within one year.[240] In response to this CSRIC IV recommendation, and for ease of reference and comment, we provide the table below to set forth the timeframes for those instances where we propose specific implementation deadlines.[241]

PROPOSED RULE AMENDMENT	PROPOSED IMPLEMENTATION TIMEFRAME
Increasing Maximum WEA Character Length	*Within 1 year of the rules' effective date*
Classifying Emergency Government Information	*Within 1 year of the rules' effective date*
Embedding Telephone Numbers and URLs	*Within 1 year of the rules' effective date*
Multimedia Alerting	*We seek comment on a reasonable timeline for Participating CMS Providers to support multimedia in WEA messages*
Multilingual Alerting	*We seek comment on a reasonable timeline for Participating CMS Providers to support*

[239] *See supra* ¶ 12.

[240] *CSRIC WEA Messaging Report* at 49.

[241] The deadlines in this chart are based on the Commission's analysis of feasible timeframes for compliance, and follow the CSRIC IV recommendations to the extent those recommendations have record support. *See, e.g., CSRIC WEA Messaging Report* at 40 (stating that Participating CMS providers have already made voluntary enhancements to improve geo-targeting); *but see CSRIC WEA Messaging Report* at 44 (recommending that "Participating CMS Provider LTE infrastructure and the FEMA IPAWS Federal Alert Gateway should support 280 displayable characters within two years after the completion of industry standards").

	multilingual WEA messages
WEA Geo-targeting	*Within 60 days of the rules' effective date*
Adopting State and Local WEA Testing and Proficiency Training	*Within 60 days of the rules' effective date*
Requiring Alert Logging Test Reporting	*Within 60 days of the adoption of final State/Local WEA Testing and proficiency training rules, or within 60 days of the launch of ETRS, whichever is later*
WEA Attention Signals and Public Service Announcements	*Within 60 days of the rules' effective date*
Non-commercial Educational and Public Broadcast Television Station Testing	*We seek comment on a reasonable timeline for testing of the broadcast-based WEA infrastructure to commence*

Figure 3*: *Proposed Implementation Timeframes

84. *Proposed WEA Messaging Rules*. We propose that all Participating CMS Providers should comply with our proposed WEA messaging rules – specifically, our proposed requirements to extend the maximum WEA message length to 360 characters, provide Emergency Government Information alert messages, and be capable of including phone numbers and URLs in WEA alerts – one year from the adoption of final rules. While we believe these proposed requirements leverage commercially available technologies, we recognize that implementation of these requirements would necessitate standards modifications.[242] In particular, according to CSRIC IV, the standards revision process associated with increasing the maximum WEA character length would take one year to complete.[243] We seek comment on this timeframe. Commenters are encouraged to specify an alternative timeline if compliance within one year is considered infeasible, or if compliance can be met earlier, including by specifying whether compliance with our proposed rules should be completed in stages. We also seek comment on benefits and costs relating to our analysis and transition period.

85. *Proposed Geo-targeting, Testing, Logging, and Reporting Rules.* We propose that all Participating CMS Providers should be required to comply with our WEA testing and geo-targeting rules within sixty days of their effective date.[244] Given that some Participating CMS Providers are already utilizing a variety of techniques discussed above to voluntarily deliver more finely geo-targeted WEA messages,[245] and that CSRIC IV recommends that the Commission establish a waiver process to the extent necessary to allow State/Local WEA Testing during the pendency of this rulemaking,[246] we believe that Participating CMS Providers are already capable of complying with our proposed geo-targeting and testing rules, and that it would serve the public interest to implement these requirements in a swift manner. We seek comment on this timeframe and on our rationale.

[242] *See supra* ¶ 12 (stating that, according to CSRIC IV, 4G LTE networks can already accommodate 280-character alerts); *supra* ¶ 13 (stating that, according to FEMA, standards would need to be modified to accommodate the coexistence of 90- and 280-character WEA messages); *supra* ¶ 28 (stating that, according to CSRIC IV, standards would need to be revised in order to accommodate URLs and phone numbers in AMBER Alerts).

[243] *See CSRIC WEA Messaging Report* at 44 (recommending "that standards modifications be complete within one year of the issuance of an FCC Report & Order").

[244] *See* 47 U.S.C. § 1.427(a) (stating that "[a]ny rule issued by the Commission will be made effective not less than 30 days from the time it is published in the Federal Register except as otherwise specified").

[245] *See supra* ¶ 36.

[246] *See CSRIC WEA Testing Report* at 16.

86. We further propose that Participating CMS Providers should comply with WEA alert logging and test reporting requirements within sixty days of the adoption of final State/Local WEA Testing and proficiency training rules, or within sixty days of the launch of ETRS, whichever is later. We note that we required EAS Participants to file test report data in ETRS within sixty days of the effective date of the ETRS rules, or within sixty days of the launch of the ETRS, whichever was later.[247] We anticipate that filing test result data in ETRS will present Participating CMS Providers with obligations similar to those of EAS Participants. If ETRS is not operational within sixty days of the adoption of final State/Local WEA Testing rules, we propose to encourage state and local alert originators who engage in State/Local WEA Testing to file self-recorded test results in PS Docket No. 15-91 using the Electronic Comment Filing System (ECFS) until ETRS becomes operational.[248] In this manner, any meaningful data from initial State/Local WEA Tests would be captured and recorded, and could be leveraged to help improve WEA. Finally, we propose that any amendments to our WEA rules to allow the use of the WEA tones in government-produced PSAs would be effective sixty days from their effective date.

87. *Providing Multilingual and Multimedia Alerts.* We seek comment on timeframes within which it would be reasonable to expect Participating CMS Providers to support WEA messages in languages other than English, and messages that contain multimedia. In responding to our requests for comment on the form that rules regarding these issues should take, commenters are encouraged to provide timetables along which the Commission should reasonably expect Participating CMS Providers to comply with such requirements, including any interim milestones that the Commission might expect Participating CMS Providers to reach along the way to fulfilling the Commission's ultimate objectives.

88. *NCE and Public Broadcast Television Station Testing.* We ask commenters to propose a specific implementation timeframe to enable NCE and public broadcast television station licensees and permittees to test the installed equipment. For example, if we were to require NCE/public broadcast television station testing of equipment, should such a requirement be phased in over a specific period of time? Under a phased-in approach, what would be appropriate milestones to guide implementation of such testing requirements? What would be the costs and benefits of a phased in approach?

IV. PROCEDURAL MATTERS

A. Ex Parte Rules

89. The proceeding this *Notice* initiates shall be treated as a "permit-but-disclose" proceeding in accordance with the Commission's *ex parte* rules.[249] Persons making *ex parte* presentations must file a copy of any written presentation or a memorandum summarizing any oral presentation within two business days after the presentation (unless a different deadline applicable to the Sunshine period applies). Persons making oral *ex parte* presentations are reminded that memoranda summarizing the presentation must: (1) list all persons attending or otherwise participating in the meeting at which the *ex parte* presentation was made; and (2) summarize all data presented and arguments made during the presentation. If the presentation consisted in whole or in part of the presentation of data or arguments already reflected in the presenter's written comments, memoranda, or other filings in the proceeding, the presenter may provide citations to such data or arguments in his or her prior comments, memoranda, or other filings (specifying the relevant page and/or paragraph numbers where such data or arguments can be found) in lieu of summarizing them in the memorandum. Documents shown or given to Commission staff during *ex parte* meetings are deemed to be written *ex parte* presentations and must be filed consistent with rule 1.1206(b). In proceedings governed by rule 1.49(f) or for which the Commission has made available a method of electronic filing, written *ex parte* presentations and memoranda summarizing oral *ex parte* presentations, and all attachments thereto, must be filed through the electronic comment

[247] *See Sixth Report and Order*, 30 FCC Rcd at 6546, ¶ 56.

[248] ELECTRONIC COMMENT FILING SYSTEM, http://apps.fcc.gov/ecfs/upload/display (last visited Jun. 17, 2015).

[249] 47 C.F.R. §§ 1.1200 *et seq.*

filing system available for that proceeding, and must be filed in their native format (*e.g.*, .doc, .xml, .ppt, searchable .pdf). Participants in this proceeding should familiarize themselves with the Commission's *ex parte* rules.

B. Comment Filing Procedures

90. Pursuant to Sections 1.415 and 1.419 of the Commission's rules, 47 CFR §§ 1.415, 1.419, interested parties may file comments and reply comments in response to this *Notice* on or before the dates indicated on the first page of this document. Comments may be filed using the Commission's Electronic Comment Filing System (ECFS). *See Electronic Filing of Documents in Rulemaking Proceedings*, 63 FR 24121 (1998).

- Electronic Filers: Comments may be filed electronically using the Internet by accessing the ECFS: http://fjallfoss.fcc.gov/ecfs2/.
- Paper Filers: Parties that choose to file by paper must file an original and one copy of each filing. If more than one docket or rulemaking number appears in the caption of this proceeding, filers must submit two additional copies for each additional docket or rulemaking number.
- Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail. All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission.
    1. All hand-delivered or messenger-delivered paper filings for the Commission's Secretary must be delivered to FCC Headquarters at 445 12th St., SW, Room TW-A325, Washington, DC 20554. The filing hours are 8:00 a.m. to 7:00 p.m. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes and boxes must be disposed of before entering the building.
    2. Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9300 East Hampton Drive, Capitol Heights, MD 20743.
    3. U.S. Postal Service first-class, Express, and Priority mail must be addressed to 445 12th Street, SW, Washington DC 20554.
- People with Disabilities: To request materials in accessible formats for people with disabilities (braille, large print, electronic files, audio format), send an e-mail to fcc504@fcc.gov or call the Consumer & Governmental Affairs Bureau at 202-418-0530 (voice), 202-418-0432 (tty).

C. Initial Regulatory Flexibility Analysis

91. As required by the Regulatory Flexibility Act of 1980, *see* 5 U.S.C. § 604, the Commission has prepared an Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on small entities of the policies and rules addressed in this document. The IRFA is set forth in Appendix B. Written public comments are requested in the IRFA. These comments must be filed in accordance with the same filing deadlines as comments filed in response to this *Notice of Proposed Rulemaking* as set forth on the first page of this document, and have a separate and distinct heading designating them as responses to the IRFA.

D. Initial Paperwork Reduction Analysis

92. This document contains proposed new and modified information collection requirements. The Commission, as part of its continuing effort to reduce paperwork burdens, invites the general public and the Office of Management and Budget (OMB) to comment on the information collection requirements contained in this document, as required by the Paperwork Reduction Act of 1995, Public Law 104-13. In addition, pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198, *see* 44 U.S.C. 3506(c)(4), we seek specific comment on how we might further reduce the information collection burden for small business concerns with fewer than 25 employees.

E. Further Information.

93. For further information regarding the Notice of Proposed Rulemaking contact James Wiley, Attorney Advisor, Policy and Licensing Division, Public Safety and Homeland Security Bureau, at (202) 418-1678 or james.wiley@fcc.gov or John A. Evanoff, Attorney-Advisor, Policy and Licensing Division, Public Safety and Homeland Security Bureau, (202) 418-0848 or john.evanoff@fcc.gov.

V. ORDERING CLAUSES

94. Accordingly, IT IS ORDERED that pursuant to Sections 1, 4(i) and (o), 201, 303(r), 403, and 706 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 154(i) and (o), 201, 303(r), 403, and 606, as well as by sections 602(a),(b),(c), (f), 603, 604 and 606 of the WARN Act, this *Notice of Proposed Rulemaking* IS hereby ADOPTED.

95. IT IS FURTHER ORDERED that the Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, SHALL SEND a copy of this *Notice of Proposed Rulemaking* including the Initial Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary

APPENDIX A

Proposed Rules

The rules in this part are issued pursuant to the authority contained in the Warning, Alert, and Response Network Act, Title VI of the Security and Accountability for Every Port Act of 2006, Pub. L. 109-347, Titles I through III of the Communications Act of 1934, as amended, and Executive Order 13407 of June 26, 2006, Public Alert and Warning System, 71 Federal Register 36975 (2006).

For the reasons discussed in the preamble, the Federal Communications Commission proposes to amend 47 C.F.R. Part 10 and 47 C.F.R. Part 11 to read as follows:

PART 10 – WIRELESS EMERGENCY ALERTS

1. Amend § 10.280 by revising paragraph (a) to read as follows:

§10.280 Subscribers' right to opt out of WEA notifications.

(a) CMS providers may provide their subscribers with the option to opt out of the "Child Abduction Emergency/AMBER Alert," "Imminent Threat Alert" and/or "Emergency Government Information" classes of Alert Messages.

* * *

2. Add new paragraph (g) to § 10.320 to read as follows:

§ 10.320 Provider alert gateway requirements

* * * * *

(g) *Alert Logging.* The CMS provider gateway must perform the following functions:

(1) Provide a mechanism to log messages with time stamps that verify when messages are received, and when the messages are acknowledged or rejected by the Participating CMS Provider Alert Gateway, and if an alert is rejected, to provide the specific error code generated by the rejection;

(2) Maintain an online log of active and cancelled alert messages for 90 days, and maintain archived logs for at least 36 months that should be accessible by Participating CMS Providers for testing and troubleshooting purposes; and

(3) Generate monthly system and performance statistics reports based on category of alert, alert originator, alert area, and other alerting attributes?

3. Add new paragraph (c) to § 10.350 to read as follows:

§10.350 WEA testing and proficiency training requirements.

This section specifies the testing that is required.

* * *

(c) *State/Local WEA Testing.* A Participating CMS Provider must ensure that their systems support State/Local WEA Testing and proficiency training.

(1) A Participating CMS Provider's Gateway shall support the ability to receive a State/Local WEA Test message initiated by the Federal Alert Gateway Administrator.

(2) A Participating CMS Provider shall distribute a State/Local WEA Test to the geographic area specified by the alert originator pursuant to the geographic targeting standard established by § 10.450 of this chapter.

(3) A Participating CMS Provider may forego a State/Local WEA Test if the State/Local WEA Test is pre-empted by actual alert traffic or if an unforeseen condition in the CMS Provider infrastructure precludes distribution of the State/Local WEA Test. A Participating CMS Provider Gateway shall indicate such an unforeseen condition by a response code to the Federal Alert Gateway.
(4) CMS Providers may provide their subscribers with the option to opt in to receive State/Local WEA Tests.

4. Add new paragraph (d) to § 10.400 to read as follows:

§10.400 Classification.

A Participating CMS Provider is required to receive and transmit four classes of Alert Messages: Presidential Alert; Imminent Threat Alert; Child Abduction Emergency/AMBER Alert; and Emergency Government Information.
* * *

(d) *Emergency Government Information.* An Emergency Government Information message is an essential public safety advisory that prescribes one or more actions likely to save lives and/or safeguard property during an emergency.

5. Amend § 10.430 to read as follows:

§10.430 Character limit.

A Participating CMS Provider must support WEA Alert Messages containing at least 90 characters of alphanumeric text. If, however, it is technically feasible for a Participating CMS Provider to support a WEA Alert Message of up to 360 characters of alphanumeric text, a Participating CMS Provider must transmit such an Alert Message.

6. Remove § 10.440.

7. Amend § 10.450 to read as follows:

§10.450 Geographic targeting.

This section establishes minimum requirements for the geographic targeting of Alert Messages. A Participating CMS Provider will determine which of its network facilities, elements, and locations will be used to geographically target Alert Messages. A Participating CMS Provider must transmit any alert message that is specified by a geocode, circle, or polygon to a target area not larger than the specified geocode, circle, or polygon. If, however, the Participating CMS Provider cannot broadcast the alert to an area that accurately matches the target area, a Participating CMS Provider may transmit an Alert Message to an area that closely approximates the target area, but in any case not exceeding the propagation area of a single transmission site.

8. Amend § 10.520 by revising paragraph (d) to read as follows:

§ 10.520 Common audio attention signal

*** * * * ***

(d) The audio attention signal must be restricted to use for Alert Messages under part 10, except as used for federal Public Service Announcements (PSAs) designed to raise public awareness about emergency alerting, provided that the federal agency presents the PSA in a non-misleading manner, including by explicitly stating that the emergency alerting attention signal is being used in the context of a PSA for the purpose of educating the viewing or listening public about emergency alerting.

PART 11 – EMERGENCY ALERT SYSTEM

1. Amend § 11.45 to read as follows:

§ 11.45 Prohibition of false or deceptive EAS transmissions.

No person may transmit or cause to transmit the EAS codes or Attention Signal, or a recording or simulation thereof, in any circumstance other than in an actual National, State or Local Area emergency or authorized test of the EAS, or as specified in Section 10.520(d).

APPENDIX B

Initial Regulatory Flexibility Analysis

1. As required by the Regulatory Flexibility Act of 1980, as amended (RFA),[1] the Commission has prepared this present Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on a substantial number of small entities by the policies and rules proposed in this Notice of Proposed Rulemaking (Notice). Written public comments are requested on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments on the Notice provided in Section IV of the Notice. The Commission will send a copy of the Notice, including this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration (SBA).[2] In addition, the Notice and IRFA (or summaries thereof) will be published in the Federal Register.[3]

A. Need for, and Objectives of, the Proposed Rules

2. With this Notice, we take another step towards strengthening Wireless Emergency Alerts (WEA) by proposing revisions to our rules to empower alert originators to participate more fully in WEA, and by enhancing the utility of WEA as an alerting tool. Our proposals fall into three categories, improving WEA messaging, geo-targeting, and testing and proficiency training. With respect to WEA messaging, in this Notice, we propose to expand the maximum character length of WEA messages from 90 to a maximum of 360 characters; create a new class of WEA alerts for Emergency Government Information; and remove our prohibition on embedded references to allow the provision of phone numbers and URLs in WEA alerts. We also seek comment on technically feasible approaches to supplement WEA alerts with multimedia, and with the capability to offer alerts in languages other than English. With respect to geo-targeting we propose to require Participating Commercial Mobile Service (CMS) Providers to distribute WEA messages to a geographic area that more accurately matches the target area provided by the alert originator. With respect to WEA testing, we propose to establish requirements and procedures for state and local WEA testing, and on alert logging requirements for Participating CMS Provider Alert Gateways, and we seek comment on test reporting requirements based, in part, upon the data produced by this logging function. We seek comment on methods of increasing participation in WEA by both consumers and CMS Providers. We propose to amend our rules to allow use of the emergency alerting attention signal for Public Service Announcements (PSAs) designed to raise public awareness about Wireless Emergency Alerts (WEA). We seek comment on whether we should begin to test the broadcast back up the C-interface. Finally, we seek comment on whether we should amend our WEA prioritization rules such that WEA alerts take priority over all mobile device functions except certain voice and data sessions.

3. This Notice represents another step towards achieving one of our highest priorities – "to ensure that all Americans have the capability to receive timely and accurate alerts, warnings and critical information regarding disasters and other emergencies." This Notice also is consistent with our obligation under Executive Order 13407 to "adopt rules to ensure that communications systems have the capacity to transmit alerts and warnings to the public as part of the public alert and warning system," and our mandate under the Communications Act to promote the safety of life and property through the use of wire and radio communication. We take these steps as part of an overarching strategy to advance the nation's alerting capability, which includes both WEA and the Emergency Alert System (EAS), to keep pace with evolving technologies and to empower communities to initiate life-saving alerts.

[1] *See* 5 U.S.C. § 603. The RFA, *see* 5 U.S.C. §§ 601-612, has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

[2] *See* 5 U.S.C. § 603(a).

[3] *Id.*

B. Legal Basis

4. Authority for the actions proposed in the Notice may be found in sections 1, 4(i) and (o), 201, 303(r), 403, and 706 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 154(i) and (o), 201, 303(r), 403, and 606, as well as sections 602(a),(b),(c), (f), 603, 604 and 606 of the WARN Act.

C. Description and Estimate of the Number of Small Entities to Which the Proposed Rules Will Apply

5. The RFA directs agencies to provide a description of, and where feasible, an estimate of the number of small entities that may be affected by the proposed rules, if adopted.[4] The RFA generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."[5] In addition, the term "small business" has the same meaning as the term "small-business concern" under the Small Business Act.[6] A small-business concern" is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the SBA.[7]

6. Nationwide, there are a total of approximately 28.2 million small businesses, according to the SBA.[8] In addition, a "small organization" is generally "any not-for-profit enterprise which is independently owned and operated and is not dominant in its field."[9] Nationwide, as of 2007, there were approximately 1,621,315 small organizations.[10] Finally, the term "small governmental jurisdiction" is defined generally as "governments of cities, towns, townships, villages, school districts, or special districts, with a population of less than fifty thousand."[11] Census Bureau data for 2007 indicate that there were 89,476 local governmental jurisdictions in the United States.[12] We estimate that, of this total, as many as 88,761 entities may qualify as "small governmental jurisdictions."[13] Thus, we estimate that most governmental jurisdictions are small.

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[4] *See* 5 U.S.C. § 603(b)(3).

[5] *See* 5 U.S.C. § 601(6).

[6] *See* 5 U.S.C. § 601(3) (incorporating by reference the definition of "small-business concern" in the Small Business Act, 15 U.S.C. § 632). Pursuant to 5 U.S.C. § 601(3), the statutory definition of a small business applies "unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register."

[7] *See* 15 U.S.C. § 632.

[8] *See* SBA, Office of Advocacy, *Frequently Asked Questions*, http://www.sba.gov/sites/default/files/FAQ_March_2014_0.pdf (last accessed Jan. 25, 2015).

[9] 5 U.S.C. § 601(4).

[10] Indep. Sector, The New Nonprofit Almanac and Desk Reference (2010).

[11] 5 U.S.C. § 601(5).

[12] U.S. Census Bureau, Statistical Abstract of the United States: 2012, Section 8, page 267, tbl. 429, https://www.census.gov/compendia/statab/2012/tables/12s0429.pdf/ (data cited therein are from 2007).

[13] The 2007 U.S. Census data for small governmental organizations are not presented based on the size of the population in each such organization. There were 89,476 local governmental organizations in 2007. If we assume that county, municipal, township, and school district organizations are more likely than larger governmental organizations to have populations of 50,000 or less, the total of these organizations is 52,095. As a basis of estimating how many of these 89,476 local government organizations were small, in 2011, we note that there were a total of 715 cities and towns (incorporated places and minor civil divisions) with populations over 50,000. City and Town Totals Vintage: 2011 – U.S. Census Bureau, http://www.census.gov/popest/data/cities/totals/2011/index.html. If we subtract the 715 cities and towns that meet or exceed the 50,000 population threshold, we conclude that approximately 88,761 are small. U.S. Census Bureau, Statistical Abstract of the United States: 2012, Section 8,

(continued….)

7. Wireless Telecommunications Carriers (except Satellite). As noted, the SBA has developed a small business size standard for small businesses in the category "Wireless Telecommunications Carriers (except satellite)."[14] Under that SBA category, a business is small if it has 1,500 or fewer employees.[15] Since 2007, the SBA has recognized wireless firms within this new, broad, economic census category.[16] This category is the best fit to describe common-carrier paging providers and cellular radiotelephone services subject to our rules. For the category of Wireless Telecommunications Carriers (except Satellite), census data for 2007 shows that there were 1,383 firms that operated for the entire year. Of this total, 1,368 firms had employment of 999 or fewer employees and 15 had employment of 1000 employees or more. Since all firms with fewer than 1,500 employees are considered small, given the total employment in the sector, we estimate that the vast majority of wireless firms are small.

8. Broadband Personal Communications Service. The broadband personal communications services (PCS) spectrum is divided into six frequency blocks designated A through F, and the Commission has held auctions for each block. The Commission initially defined a "small business" for C- and F-Block licenses as an entity that has average gross revenues of $40 million or less in the three previous calendar years.[17] For F-Block licenses, an additional small business size standard for "very small business" was added and is defined as an entity that, together with its affiliates, has average gross revenues of not more than $15 million for the preceding three calendar years.[18] These small business size standards, in the context of broadband PCS auctions, have been approved by the SBA.[19] No small businesses within the SBA-approved small business size standards bid successfully for licenses in Blocks A and B. There were 90 winning bidders that claimed small business status in the first two C-Block auctions. A total of 93 bidders that claimed small business status won approximately 40 percent of the 1,479 licenses in the first auction for the D, E, and F Blocks.[20] On April 15, 1999, the Commission completed the reauction of 347 C-, D-, E-, and F-Block licenses in Auction No. 22.[21] Of the 57 winning bidders in that auction, 48 claimed small business status and won 277 licenses.

9. On January 26, 2001, the Commission completed the auction of 422 C and F Block Broadband PCS licenses in Auction No. 35. Of the 35 winning bidders in that auction, 29 claimed small business status.[22] Subsequent events concerning Auction 35, including judicial and agency

(Continued from previous page)
page 267, tbl. 429, https://www.census.gov/compendia/statab/2012/tables/12s0429.pdf/ (data cited therein are from 2007).

[14] 13 C.F.R. § 121.201, North American Industry Classification System (NAICS) code 517210.

[15] *Id.*

[16] 13 C.F.R. § 121.201, NAICS code 517210.

[17] *See Amendment of Parts 20 and 24 of the Commission's Rules – Broadband PCS Competitive Bidding and the Commercial Mobile Radio Service Spectrum Cap; Amendment of the Commission's Cellular/PCS Cross-Ownership Rule*; WT Docket No. 96-59, GN Docket No. 90-314, Report and Order, 11 FCC Rcd 7824, 7850-52, paras. 57-60 (1996) (*PCS Report and Order*); *see also* 47 C.F.R. § 24.720(b).

[18] *See PCS Report and Order*, 11 FCC Rcd at 7852, para. 60.

[19] *See Alvarez Letter 1998*.

[20] *See Broadband PCS, D, E and F Block Auction Closes*, Public Notice, Doc. No. 89838 (rel. Jan. 14, 1997).

[21] *See C, D, E, and F Block Broadband PCS Auction Closes*, Public Notice, 14 FCC Rcd 6688 (WTB 1999). Before Auction No. 22, the Commission established a very small standard for the C Block to match the standard used for F Block. *Amendment of the Commission's Rules Regarding Installment Payment Financing for Personal Communications Services (PCS) Licensees*, WT Docket No. 97-82, Fourth Report and Order, 13 FCC Rcd 15743, 15768, para. 46 (1998).

[22] *See C and F Block Broadband PCS Auction Closes; Winning Bidders Announced*, Public Notice, 16 FCC Rcd 2339 (2001).

determinations, resulted in a total of 163 C and F Block licenses being available for grant. On February 15, 2005, the Commission completed an auction of 242 C-, D-, E-, and F-Block licenses in Auction No. 58. Of the 24 winning bidders in that auction, 16 claimed small business status and won 156 licenses.[23] On May 21, 2007, the Commission completed an auction of 33 licenses in the A, C, and F Blocks in Auction No. 71.[24] Of the 12 winning bidders in that auction, five claimed small business status and won 18 licenses.[25] On August 20, 2008, the Commission completed the auction of 20 C-, D-, E-, and F-Block Broadband PCS licenses in Auction No. 78.[26] Of the eight winning bidders for Broadband PCS licenses in that auction, six claimed small business status and won 14 licenses.[27]

10. Narrowband Personal Communications Service. To date, two auctions of narrowband personal communications services (PCS) licenses have been conducted. For purposes of the two auctions that have already been held, "small businesses" were entities with average gross revenues for the prior three calendar years of $40 million or less. Through these auctions, the Commission has awarded a total of 41 licenses, out of which 11 were obtained by small businesses. To ensure meaningful participation of small business entities in future auctions, the Commission has adopted a two-tiered small business size standard in the Narrowband PCS Second Report and Order.[28] A "small business" is an entity that, together with affiliates and controlling interests, has average gross revenues for the three preceding years of not more than $40 million. A "very small business" is an entity that, together with affiliates and controlling interests, has average gross revenues for the three preceding years of not more than $15 million. The SBA has approved these small business size standards.[29]

11. Wireless Communications Services. This service can be used for fixed, mobile, radiolocation, and digital audio broadcasting satellite uses. The Commission defined "small business" for the wireless communications services (WCS) auction as an entity with average gross revenues of $40 million for each of the three preceding years, and a "very small business" as an entity with average gross revenues of $15 million for each of the three preceding years.[30] The SBA has approved these definitions.[31]

12. 700 MHz Guard Band Licensees. In 2000, in the 700 MHz Guard Band Order, the Commission adopted size standards for "small businesses" and "very small businesses" for purposes of

[23] *See Broadband PCS Spectrum Auction Closes; Winning Bidders Announced for Auction No. 58*, Public Notice, 20 FCC Rcd 3703 (2005).

[24] *See Auction of Broadband PCS Spectrum Licenses Closes; Winning Bidders Announced for Auction No. 71*, Public Notice, 22 FCC Rcd 9247 (2007).

[25] *Id*.

[26] *See Auction of AWS-1 and Broadband PCS Licenses Closes; Winning Bidders Announced for Auction 78*, Public Notice, 23 FCC Rcd 12749 (WTB 2008).

[27] *Id.*

[28] *Amendment of the Commission's Rules to Establish New Personal Communications Services, Narrowband PCS*, GEN Docket No. 90-314, ET Docket No. 92-100, PP Docket No. 93-253, Second Report and Order and Second Further Notice of Proposed Rulemaking, 15 FCC Rcd 10456 (2000).

[29] *See* Letter to Amy Zoslov, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, FCC, from Aida Alvarez, Administrator, SBA (Dec. 2, 1998).

[30] *Amendment of the Commission's Rules to Establish Part 27, the Wireless Communications Service (WCS)*, GN Docket No. 96-228, Report and Order, 12 FCC Rcd 10785, 10879, para. 194 (1997).

[31] *See* Letter from Aida Alvarez, Administrator, SBA, to Amy Zoslov, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, Federal Communications Commission (filed Dec. 2, 1998) (*Alvarez Letter 1998*).

determining their eligibility for special provisions such as bidding credits and installment payments.[32] A small business in this service is an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding $40 million for the preceding three years.[33] Additionally, a very small business is an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than $15 million for the preceding three years.[34] SBA approval of these definitions is not required.[35] An auction of 52 Major Economic Area licenses commenced on September 6, 2000, and closed on September 21, 2000.[36] Of the 104 licenses auctioned, 96 licenses were sold to nine bidders. Five of these bidders were small businesses that won a total of 26 licenses. A second auction of 700 MHz Guard Band licenses commenced on February 13, 2001, and closed on February 21, 2001. All eight of the licenses auctioned were sold to three bidders. One of these bidders was a small business that won a total of two licenses.[37]

13. Lower 700 MHz Band Licenses. The Commission previously adopted criteria for defining three groups of small businesses for purposes of determining their eligibility for special provisions such as bidding credits.[38] The Commission defined a "small business" as an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding $40 million for the preceding three years.[39] A "very small business" is defined as an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than $15 million for the preceding three years.[40] Additionally, the lower 700 MHz Service had a third category of small business status for Metropolitan/Rural Service Area (MSA/RSA) licenses—"entrepreneur"—which is defined as an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than $3 million for the preceding three years.[41] The SBA approved these small size standards.[42] An auction of 740 licenses (one license in each of the 734 MSAs/RSAs and one license in each of the six Economic Area Groupings (EAGs)) commenced on August 27, 2002, and closed on September 18, 2002. Of the 740 licenses available for auction, 484 licenses were won by 102 winning bidders. Seventy-two of the winning bidders claimed small business, very small business or entrepreneur status and won a total of 329 licenses.[43] A second auction commenced on May 28, 2003, closed on June 13, 2003, and included 256 licenses: 5 EAG licenses and 476 Cellular Market Area licenses.[44] Seventeen

[32] *See Service Rules for the 746–764 MHz Bands, and Revisions to Part 27 of the Commission's Rules*, WT Docket No. 99-168, Second Report and Order, 15 FCC Rcd 5299 (2000) (*746–764 MHz Band Second Report and Order*).

[33] *See id.* at 5343, para. 108.

[34] *See id.*

[35] *See id.* at 5343, para. 108 n.246 (for the 746–764 MHz and 776–794 MHz bands, the Commission is exempt from 15 U.S.C. § 632, which requires Federal agencies to obtain SBA approval before adopting small business size standards).

[36] *See 700 MHz Guard Bands Auction Closes: Winning Bidders Announced*, Public Notice, 15 FCC Rcd 18026 (WTB 2000).

[37] *See 700 MHz Guard Bands Auction Closes: Winning Bidders Announced*, Public Notice, 16 FCC Rcd 4590 (WTB 2001).

[38] *See Reallocation and Service Rules for the 698–746 MHz Spectrum Band (Television Channels 52–59)*, GN Docket No. 01-74, Report and Order, 17 FCC Rcd 1022 (2002) (*Channels 52–59 Report and Order*).

[39] *See id.* at 1087-88, para. 172.

[40] *See id.*

[41] *See id.*, at 1088, para. 173.

[42] *See Alvarez Letter 1999*.

[43] *See Lower 700 MHz Band Auction Closes*, Public Notice, 17 FCC Rcd 17272 (WTB 2002).

[44] *See id.*

winning bidders claimed small or very small business status and won 60 licenses, and nine winning bidders claimed entrepreneur status and won 154 licenses.[45] On July 26, 2005, the Commission completed an auction of 5 licenses in the Lower 700 MHz band (Auction No. 60). There were three winning bidders for five licenses. All three winning bidders claimed small business status.

14. In 2007, the Commission reexamined its rules governing the 700 MHz band in the *700 MHz Second Report and Order*.[46] An auction of 700 MHz licenses commenced January 24, 2008 and closed on March 18, 2008, which included, 176 Economic Area licenses in the A Block, 734 Cellular Market Area licenses in the B Block, and 176 EA licenses in the E Block.[47] Twenty winning bidders, claiming small business status (those with attributable average annual gross revenues that exceed $15 million and do not exceed $40 million for the preceding three years) won 49 licenses. Thirty three winning bidders claiming very small business status (those with attributable average annual gross revenues that do not exceed $15 million for the preceding three years) won 325 licenses.

15. Upper 700 MHz Band Licenses. In the *700 MHz Second Report and Order*, the Commission revised its rules regarding Upper 700 MHz licenses.[48] On January 24, 2008, the Commission commenced Auction 73 in which several licenses in the Upper 700 MHz band were available for licensing: 12 Regional Economic Area Grouping licenses in the C Block, and one nationwide license in the D Block.[49] The auction concluded on March 18, 2008, with 3 winning bidders claiming very small business status (those with attributable average annual gross revenues that do not exceed $15 million for the preceding three years) and winning five licenses.

16. Advanced Wireless Services. *AWS Services (1710–1755 MHz and 2110–2155 MHz bands (AWS-1); 1915–1920 MHz, 1995–2000 MHz, 2020–2025 MHz and 2175–2180 MHz bands (AWS-2); 2155–2175 MHz band (AWS-3))*. For the AWS-1 bands,[50] the Commission has defined a "small business" as an entity with average annual gross revenues for the preceding three years not exceeding $40 million, and a "very small business" as an entity with average annual gross revenues for the preceding three years not exceeding $15 million. For AWS-2 and AWS-3, although we do not know for certain which entities are likely to apply for these frequencies, we note that the AWS-1 bands are comparable to those used for cellular service and personal communications service. The Commission has not yet adopted size standards for the AWS-2 or AWS-3 bands but proposes to treat both AWS-2 and AWS-3 similarly to broadband PCS service and AWS-1 service due to the comparable capital requirements and

[45] *See id.*

[46] *Service Rules for the 698–746, 747–762 and 777–792 MHz Band; Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems; Section 68.4(a) of the Commission's Rules Governing Hearing Aid-Compatible Telephones; Biennial Regulatory Review—Amendment of Parts 1, 22, 24, 27, and 90 to Streamline and Harmonize Various Rules Affecting Wireless Radio Services; Former Nextel Communications, Inc. Upper 700 MHz Guard Band Licenses and Revisions to Part 27 of the Commission's Rules; Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band; Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Communications Requirements Through the Year 2010; Declaratory Ruling on Reporting Requirement under Commission's Part 1 Anti-Collusion Rule*, WT Docket Nos. 07-166, 06-169, 06-150, 03-264, 96-86, PS Docket No. 06-229, CC Docket No. 94-102, Second Report and Order, 22 FCC Rcd 15289, 15359 n. 434 (2007) (*700 MHz Second Report and Order*).

[47] *See Auction of 700 MHz Band Licenses Closes*, Public Notice, 23 FCC Rcd 4572 (WTB 2008).

[48] *700 MHz Second Report and Order*, 22 FCC Rcd 15289.

[49] *See Auction of 700 MHz Band Licenses Closes*, Public Notice, 23 FCC Rcd 4572 (WTB 2008).

[50] The service is defined in section 90.1301 *et seq*. of the Commission's Rules, 47 C.F.R. § 90.1301 *et seq*.

other factors, such as issues involved in relocating incumbents and developing markets, technologies, and services.[51]

17. Broadband Radio Service and Educational Broadband Service. Broadband Radio Service systems, previously referred to as Multipoint Distribution Service (MDS) and Multichannel Multipoint Distribution Service (MMDS) systems, and "wireless cable," transmit video programming to subscribers and provide two-way high speed data operations using the microwave frequencies of the Broadband Radio Service (BRS) and Educational Broadband Service (EBS) (previously referred to as the Instructional Television Fixed Service (ITFS)).[52] In connection with the 1996 BRS auction, the Commission established a small business size standard as an entity that had annual average gross revenues of no more than $40 million in the previous three calendar years.[53] The BRS auctions resulted in 67 successful bidders obtaining licensing opportunities for 493 Basic Trading Areas (BTAs). Of the 67 auction winners, 61 met the definition of a small business. BRS also includes licensees of stations authorized prior to the auction. At this time, we estimate that of the 61 small business BRS auction winners, 48 remain small business licensees. In addition to the 48 small businesses that hold BTA authorizations, there are approximately 392 incumbent BRS licensees that are considered small entities.[54] After adding the number of small business auction licensees to the number of incumbent licensees not already counted, we find that there are currently approximately 440 BRS licensees that are defined as small businesses under either the SBA or the Commission's rules.

18. In 2009, the Commission conducted Auction 86, the sale of 78 licenses in the BRS areas.[55] The Commission offered three levels of bidding credits: (i) a bidder with attributed average annual gross revenues that exceed $15 million and do not exceed $40 million for the preceding three years (small business) received a 15 percent discount on its winning bid; (ii) a bidder with attributed average annual gross revenues that exceed $3 million and do not exceed $15 million for the preceding three years (very small business) received a 25 percent discount on its winning bid; and (iii) a bidder with attributed average annual gross revenues that do not exceed $3 million for the preceding three years (entrepreneur) received a 35 percent discount on its winning bid.[56] Auction 86 concluded in 2009 with

[51] *See Service Rules for Advanced Wireless Services in the 1.7 GHz and 2.1 GHz Bands*, WT Docket No. 02-353, Report and Order, 18 FCC Rcd 25162, Appx. B (2003), *modified by Service Rules for Advanced Wireless Services in the 1.7 GHz and 2.1 GHz Bands*, WT Docket No. 02-353, Order on Reconsideration, 20 FCC Rcd 14058, Appx. C (2005); *Service Rules for Advanced Wireless Services in the 1915–1920 MHz, 1995–2000 MHz, 2020–2025 MHz and 2175–2180 MHz Bands; Service Rules for Advanced Wireless Services in the 1.7 GHz and 2.1 GHz Bands*, WT Docket Nos. 04-356, 02-353, Notice of Proposed Rulemaking, 19 FCC Rcd 19263, Appx. B (2005); *Service Rules for Advanced Wireless Services in the 2155–2175 MHz Band*, WT Docket No. 07-195, Notice of Proposed Rulemaking, 22 FCC Rcd 17035, Appx. (2007).

[52] *Amendment of Parts 21 and 74 of the Commission's Rules with Regard to Filing Procedures in the Multipoint Distribution Service and in the Instructional Television Fixed Service and Implementation of Section 309(j) of the Communications Act—Competitive Bidding*, MM Docket No. 94-131, PP Docket No. 93-253, Report and Order, 10 FCC Rcd 9589, 9593, para. 7 (1995).

[53] 47 C.F.R. § 21.961(b)(1).

[54] 47 U.S.C. § 309(j). Hundreds of stations were licensed to incumbent MDS licensees prior to implementation of Section 309(j) of the Communications Act of 1934, 47 U.S.C. § 309(j). For these pre-auction licenses, the applicable standard is SBA's small business size standard of 1500 or fewer employees.

[55] Auction of Broadband Radio Service (BRS) Licenses, Scheduled for October 27, 2009, Notice and Filing Requirements, Minimum Opening Bids, Upfront Payments, and Other Procedures for Auction 86, AU Docket No. 09-56, *Public Notice*, 24 FCC Rcd 8277 (2009).

[56] *Id.* at 8296 para. 73.

the sale of 61 licenses.[57] Of the ten winning bidders, two bidders that claimed small business status won 4 licenses; one bidder that claimed very small business status won three licenses; and two bidders that claimed entrepreneur status won six licenses.

19. In addition, the SBA's Cable Television Distribution Services small business size standard is applicable to EBS. There are presently 2,436 EBS licensees. All but 100 of these licenses are held by educational institutions. Educational institutions are included in this analysis as small entities.[58] Thus, we estimate that at least 2,336 licensees are small businesses. Since 2007, Cable Television Distribution Services have been defined within the broad economic census category of Wired Telecommunications Carriers; that category is defined as follows: "This industry comprises establishments primarily engaged in operating and/or providing access to transmission facilities and infrastructure that they own and/or lease for the transmission of voice, data, text, sound, and video using wired telecommunications networks. Transmission facilities may be based on a single technology or a combination of technologies."[59] The SBA has developed a small business size standard for this category, which is: all such firms having 1,500 or fewer employees. To gauge small business prevalence for these cable services we must, however, use the most current census data that are based on the previous category of Cable and Other Program Distribution and its associated size standard; that size standard was: all such firms having $13.5 million or less in annual receipts.[60] According to Census Bureau data for 2007, there were a total of 996 firms in this category that operated for the entire year.[61] Of this total, 948 firms had annual receipts of under $10 million, and 48 firms had receipts of $10 million or more but less than $25 million.[62] Thus, the majority of these firms can be considered small. In the Paging *Third Report and Order*, we developed a small business size standard for "small businesses" and "very small businesses" for purposes of determining their eligibility for special provisions such as bidding credits and installment payments.[63] A "small business" is an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding $15 million for the preceding three years. Additionally, a "very small business" is an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than $3 million for the preceding three years.[64] The SBA has approved these small business size standards.[65] An auction of Metropolitan Economic Area licenses commenced on

[57] Auction of Broadband Radio Service Licenses Closes, Winning Bidders Announced for Auction 86, Down Payments Due November 23, 2009, Final Payments Due December 8, 2009, Ten-Day Petition to Deny Period, *Public Notice*, 24 FCC Rcd 13572 (2009).

[58] The term "small entity" within SBREFA applies to small organizations (nonprofits) and to small governmental jurisdictions (cities, counties, towns, townships, villages, school districts, and special districts with populations of less than 50,000). 5 U.S.C. §§ 601(4)-(6). We do not collect annual revenue data on EBS licensees.

[59] U.S. Census Bureau, 2012 NAICS Definitions, "517110 Wired Telecommunications Carriers," (partial definition), http://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=517110&search=2012.

[60] 13 C.F.R. § 121.201, NAICS code 517110.

[61] U.S. Census Bureau, 2007 Economic Census, Subject Series: Information, Receipts by Enterprise Employment Size for the United States: 2007, NAICS code 517510 (rel. Nov. 19, 2010).

[62] *Id*.

[63] *Amendment of Part 90 of the Commission's Rules to Provide for the Use of the 220-222 MHz Band by the Private Land Mobile Radio Service*, PR Docket No. 89-552, Third Report and Order and Fifth Notice of Proposed Rulemaking, 12 FCC Rcd 10943, 11068-70, paras. 291-295, 62 FR 16004 (Apr. 3, 1997).

[64] *See* Letter to Amy Zoslov, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, FCC, from A. Alvarez, Administrator, SBA (Dec. 2, 1998).

[65] *Revision of Part 22 and Part 90 of the Commission's Rules to Facilitate Future Development of Paging Systems*, Memorandum Opinion and Order on Reconsideration and Third Report and Order, 14 FCC Rcd 10030, paras. 98-107 (1999).

February 24, 2000, and closed on March 2, 2000.[66] Of the 985 licenses auctioned, 440 were sold. Fifty-seven companies claiming small business status won. Also, according to Commission data, 365 carriers reported that they were engaged in the provision of paging and messaging services.[67] Of those, we estimate that 360 are small, under the SBA-approved small business size standard.[68]

20. Wireless Communications Service. This service can be used for fixed, mobile, radiolocation, and digital audio broadcasting satellite uses. The Commission established small business size standards for the wireless communications services (WCS) auction.[69] A "small business" is an entity with average gross revenues of $40 million for each of the three preceding years, and a "very small business" is an entity with average gross revenues of $15 million for each of the three preceding years. The SBA has approved these small business size standards.[70] The Commission auctioned geographic area licenses in the WCS service. In the auction, there were seven winning bidders that qualified as "very small business" entities, and one that qualified as a "small business" entity.

21. Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing. The Census Bureau defines this category as follows: "This industry comprises establishments primarily engaged in manufacturing radio and television broadcast and wireless communications equipment. Examples of products made by these establishments are: transmitting and receiving antennas, cable television equipment, GPS equipment, pagers, cellular phones, mobile communications equipment, and radio and television studio and broadcasting equipment."[71] The SBA has developed a small business size standard for firms in this category, which is: all such firms having 750 or fewer employees.[72] According to Census Bureau data for 2010, there were a total of 810 establishments in this category that operated for the entire year.[73] Of this total, 787 had employment of fewer than 500, and an additional 23 had employment of 500 to 999.[74] Thus, under this size standard, the majority of firms can be considered small.

22. Software Publishers. Since 2007 these services have been defined within the broad economic census category of Custom Computer Programming Services; that category is defined as establishments primarily engaged in writing, modifying, testing, and supporting software to meet the

[66] *Id.* at 10085, para. 98.

[67] FCC Wireline Competition Bureau, Industry Analysis and Technology Division, "Trends in Telephone Service" at Table 5.3., page 5-5 (Feb. 2007). This source uses data that are current as of October 20, 2005.

[68] *Id.*

[69] Public Notice, "Auction of Wireless Communications Services, Auction Notes and Filing Requirements for 128 WCS Licenses Scheduled for April 15, 1997," DA 97-386, Feb. 21, 1997.

[70] SBA Dec. 2, 1998 Letter.

[71] U.S. Census Bureau, 2007 NAICS Definitions, "334220 Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing"; http://www.census.gov/naics/2007/def/ND334220.HTM#N334220.

[72] 13 C.F.R. § 121.201, NAICS code 334220.

[73] U.S. Census Bureau, American FactFinder, 2010 Economic Census, Industry Series, Industry Statistics by Employment Size, NAICS code 334220 (released June 26, 2012); http://factfinder.census.gov. The number of "establishments" is a less helpful indicator of small business prevalence in this context than would be the number of "firms" or "companies," because the latter take into account the concept of common ownership or control. Any single physical location for an entity is an establishment, even though that location may be owned by a different establishment. Thus, the numbers given may reflect inflated numbers of businesses in this category, including the numbers of small businesses.

[74] *Id.* Eighteen establishments had employment of 1,000 or more.

needs of a particular customer.[75] The SBA has developed a small business size standard for this category, which is annual gross receipts of $25 million or less.[76] According to data from the 2007 U.S. Census, there were 41,571 establishments engaged in this business in 2007. Of these, 40,149 had annual gross receipts of less than $10,000,000. Another 1,422 establishments had gross receipts of $10,000,000 or more.[77] Based on this data, the Commission concludes that the majority of the businesses engaged in this industry are small.

23. NCE and Public Broadcast Stations. The Census Bureau defines this category as follows: "This industry comprises establishments primarily engaged in broadcasting images together with sound. These establishments operate television broadcasting studios and facilities for the programming and transmission of programs to the public."[78] The SBA has created a small business size standard for Television Broadcasting entities, which is: such firms having $13 million or less in annual receipts.[79] According to Commission staff review of the BIA Publications, Inc., Master Access Television Analyzer Database as of May 16, 2003, about 814 of the 1,220 commercial television stations in the United States had revenues of $12 (twelve) million or less. We note, however, that in assessing whether a business concern qualifies as small under the above definition, business (control) affiliations[80] must be included. Our estimate, therefore, likely overstates the number of small entities that might be affected by our action, because the revenue figure on which it is based does not include or aggregate revenues from affiliated companies.

24. In addition, an element of the definition of "small business" is that the entity not be dominant in its field of operation. We are unable at this time to define or quantify the criteria that would establish whether a specific television station is dominant in its field of operation. Accordingly, the estimate of small businesses to which rules may apply do not exclude any television station from the definition of a small business on this basis and are therefore over-inclusive to that extent. Also as noted, an additional element of the definition of "small business" is that the entity must be independently owned and operated. We note that it is difficult at times to assess these criteria in the context of media entities and our estimates of small businesses to which they apply may be over-inclusive to this extent. There are also 2,117 low power television stations (LPTV).[81] Given the nature of this service, we will presume that all LPTV licensees qualify as small entities under the above SBA small business size standard.

25. The Commission has, under SBA regulations, estimated the number of licensed NCE television stations to be 380.[82] We note, however, that, in assessing whether a business concern qualifies as small under the above definition, business (control) affiliations[83] must be included. Our estimate,

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[75] http://www.census.gov/cgi-bin/sssd/naics/naicsrch

[76] 13 C.F.R. Section 121.201

[77] http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2007_US_54SSSZ1&prodType=table

[78] U.S. Census Bureau, 2002 NAICS Definitions, "515120 Television Broadcasting" (partial definition); http://www.census.gov/epcd/naics02/def/NDEF515.HTM.

[79] 13 C.F.R. § 121.201, NAICS code 515120.

[80] "Concerns are affiliates of each other when one concern controls or has the power to control the other or a third party or parties controls or has to power to control both." 13 C.F.R. § 21.103(a)(1).

[81] *FCC News Release,* "Broadcast Station Totals as of September 30, 2005."

[82] *See Broadcast Station Totals, supra* IRFA note 11.

[83] "[Business concerns] are affiliates of each other when one concern controls or has the power to control the other or a third party or parties controls or has to power to control both." 13 C.F.R. § 121.103(a)(1).

therefore, likely overstates the number of small entities that might be affected by our action, because the revenue figure on which it is based does not include or aggregate revenues from affiliated companies. The Commission does not compile and otherwise does not have access to information on the revenue of NCE stations that would permit it to determine how many such stations would qualify as small entities.

D. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements

26. This Notice proposes new or modified reporting or recordkeeping requirements. Any changes to the Part 10 WEA technical rules, including message and geo-targeting requirements, may result in modified reporting and recordkeeping requirements necessary to satisfy the statutory requirements of the WARN Act (1) that Commission receive notice of election by all CMS providers concerning whether they will participate in the WEA; (2) CMS providers electing not to transmit, in part or in whole, in the WEA must provide clear and conspicuous notice, which takes into account the needs of persons with disabilities, to new subscribers of its non-election or partial election at the point of sale; and (3) CMS providers electing not to transmit WEA Alert messages, in part or in whole, must also provide clear and conspicuous notice, which takes into account the needs of persons with disabilities, to existing subscribers of its non-election or partial election by means of an announcement amending the existing subscriber's service agreement. Although the Notice does not propose revising the existing election procedures, we note that the CSRIC IV recommends that the Commission modify the current election procedures and provide Participating CMS Providers an opportunity to revise previous WEA election to comply only with the WEA rules that existed at the time of their initial election, and not those adopted subsequently. Moreover, amending the Commission's rules to require Participating CMS Providers to log the receipt of alerts and report the results of State/Local WEA Tests to the Commission may result in increasing the reporting and recordkeeping costs and burdens approved under OMB Control No. 3060-1113, ICR Reference No. 201404-3060-021. Test reporting and alert logging requirements may require small businesses to contract with engineers in order to make modifications to Participating CMS Provider Alert Gateways and mobile devices.

27. Additionally, any changes to the existing WEA testing regime to require Participating CMS Providers to support State and Local testing will entail some form of recordkeeping that will be used by the Commission to satisfy the statutory requirement of the WARN Act that the Commission "shall require by regulation technical testing for commercial mobile service providers that elect to transmit emergency alerts and for the devices and equipment used by such providers for transmitting such alerts." Specifically, amending the Commission's rules to require Participating CMS Providers to participate in State/Local WEA testing as well as maintaining a log of RMT results and generating reports will require a modification to the cost and hours burdens approved by OMB under OMB Control Number 3060-1126, ICR Reference No. 201502-3060-020. The proposals set forth in the Notice are intended to advance our public safety mission and establish an effective WEA in a manner that imposes minimal regulatory burdens on affected entities.

E. Steps Taken to Minimize the Significant Economic Impact on Small Entities, and Significant Alternatives Considered

28. The RFA requires an agency to describe any significant alternatives that it has considered in developing its approach, which may include the following four alternatives (among others): "(1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance and reporting requirements under the rule for such small entities; (3) the use of performance rather than design standards; and (4) an exemption from coverage of the rule, or any part thereof, for such small entities."[84]

[84] 5 U.S.C. § 603(c)(1) – (c)(4).

29. As noted in paragraph 1 above, this Notice initiates a rulemaking to update the rules governing the WEA system by which Participating CMS providers may elect to transmit emergency alerts to the public, a goal mandated by the WARN Act and consistent with the Commission's obligation to protect the lives and property of the public. Primarily, this Notice seeks comment on three general categories of proposed rule changes: messaging, geo-targeting and testing.

30. With regard to WEA messaging and geo-targeting, this Notice seeks comment on a number of options to minimize the economic impact on small entities. First, the Notice proposes to expand the maximum character length of WEA messages from 90 to 360 characters and also seeks comment on alternatives such as rendering 140 character WEA alerts. The Notice also seeks comment on the extent Participating CMS Providers can leverage existing technology and best practices to minimize costs. Additionally, the Notice seeks comment on whether existing software is capable of rendering 360-character WEA alerts. Further, the Notice seeks comment on developing an appropriate timeframe for Participating CMS Providers to begin rendering longer WEA alerts in order to mitigate costs.

31. Second, the Notice proposes to create a new class of WEA alerts for Emergency Government Information. In that connection, the Notice seeks comment on measures to mitigate costs, including the utility of providing alert originators training and guidelines to minimize burdens. Further, the Notice seeks comment on developing an appropriate timeframe for Participating CMS Providers to begin rendering Emergency Government Information alerts in order to mitigate costs.

32. Third, the Notice proposes to allow the provision of phone numbers and URLs in WEA alerts. The Notice seeks comment, in the alternative, on whether embedded references should be allowed only in AMBER Alerts. The Notice seeks comment on developing an appropriate timeframe for Participating CMS Providers to begin rendering embedded phone numbers and URLs in WEA alerts in order to mitigate costs. Additionally, the Notice seeks comment on leveraging existing technology to supplement WEA alerts with multimedia.

33. Fourth, the Notice proposes to require Participating CMS Providers to geo-target WEA messages more precisely. The Notice seeks comment on leveraging existing technology and best practices, including network-side enhancement already voluntarily undertaken by Participating CMS Providers, to more precisely geo-target WEA alerts. The Notice also seeks comment on alternatives such as allowing Participating CMS Providers to render geo-targeted WEA alerts to the area that approximates the alert target area. The Notice also seeks comment on the extent "device-assisted" geo-targeting solutions already exist and can be implemented to "filter" WEA alerts based on coordinates as well as the extent that third party developers might create applications to improve geo-targeting. Further, the Notice seeks comment on developing an appropriate timeframe for Participating CMS Providers to begin geo-targeting WEA alerts in order to mitigate costs.

34. With respect to WEA testing and proficiency training, this Notice proposes to establish requirements and procedures governing Participating CMS Provider support for state and local WEA testing, and seeks comment on alert logging requirements for Participating CMS Provider Alert Gateways and test reporting requirements based, in part, upon the data produced by this logging function. First, in order to minimize the costs associated with supporting state and local testing, the Notice seeks comment on (1) leveraging the existing RMT testing protocol and (2) the use of best practices and standards developed through a public/private partnership including geo-targeting tests to localized areas and providing an opportunity for volunteers to participate in WEA tests. Second, the Notice seeks comment on how to minimize the costs associated with testing reporting requirements for state and local tests, including leveraging existing logging functionality and best practices, as well as relying on an informal approach to reporting test results and the extent that third-party developers may automate the proposed test filing procedures. The Notice seeks comment on the appropriate timeframe within which Participating CMS Providers should comply with the proposed testing requirements.

35. In commenting on these questions, commenters are invited to propose steps that the Commission may take to minimize any significant economic impact on small entities. For example, the Notice seeks comment on whether the benefits of extending liability protection to these proposals

sufficiently outweigh the costs to Participating CMS Providers for participating in WEA. The Notice also seeks comment on the feasibility of its messaging, geo-targeting and testing proposals as well as an appropriate transition period from the current technical and testing requirements to the proposed rule changes contained in the Notice. When considering proposals made by other parties, commenters are invited to propose significant alternatives that serve the goals of these proposals.

F. Federal Rules that May Duplicate, Overlap, or Conflict with the Proposed Rules

36. None.

STATEMENT OF CHAIRMAN TOM WHEELER

Re: Improving Wireless Emergency Alerts and Community Initiated Alerting (PS Docket No. 15-91)

We often talk about how the Commission's policies have the power to improve people's lives. Wireless Emergency Alerts go beyond improving lives; these alerts save lives.

Consider the events of July 1, 2013 in East Windsor, Connecticut. A tornado swept through town, tearing apart an inflatable indoor soccer dome and blowing parts onto the nearby highway. Literally two minutes before the tornado hit, the soccer dome was filled with 29 children and five camp counselors. With moments to spare, they were evacuated to an adjoining building where they sought shelter. The reason they knew to seek cover was that the manager of the soccer camp received a Wireless Emergency Alert from the National Weather Service on her phone saying a tornado was headed her way, and she responded immediately.

Available since 2012, Wireless Emergency Alerts provide advance warning directly to your mobile phone in threatening situations where a few moments can make all the difference. Typical messages include severe weather information and Amber Alerts, but we have also seen local law enforcement use this tool to clear an area when an active gunman opened fire on random people at a Los Angeles apartment complex.

Wireless Emergency Alerts mark an important step forward in our use of technology to enhance public safety. Now that stakeholders have a few years' experience with the service, we can make it even better.

Today's proposal would make Wireless Emergency Alerts an even more effective tool for communicating important information to the public. For example, it proposes increasing the amount and type of information that can be included in alerts so that users can be better informed about the type of emergency and the best actions to take in response. We also seek to improve alert quality and accessibility by those with disabilities through a number of proposals including enabling embedded phone numbers or URLs and multimedia messaging.

The proposal would also make it easier for state and local authorities to send alerts, test the service, train personnel, and provide alerts on additional types of emergencies. In addition, we are seeking comment a variety of other potential enhancements, including how best to implement multilingual alerting.

To ensure that people do not receive unwarranted alarms in situations where they face no danger, we also propose to require participating wireless providers to deliver the alerts to more targeted geographic areas.

Wireless Emergency Alerts have already saved lives. It only makes sense to expand its use and increase its effectiveness.

Thank you to the Public Safety Bureau for their work on this item.

STATEMENT OF COMMISSIONER MIGNON L. CLYBURN

Re: Improving Wireless Emergency Alerts and Community-Initiated Alerting, PS Docket No. 15-91

Last Friday evening, our hearts collectively skipped a beat as we saw and listened in disbelief the images and commentary of the horrific, violent attacks on one of our country's oldest allies. Reports of how Parisians used their mobile phones to call for help, access services on social media networks, receive updates on the dangers in specific geographic areas, and to tell family and friends where they can find safe havens are tragically powerful reminders that, when faced with a dire emergency, people increasingly turn first to advanced mobile technologies.

The one ray of positive news we are able to share in this dreadful aftermath, is that this Commission is showing great leadership in ensuring the wireless industry and public safety communities keep pace with growing consumer expectations through the adoption of rules which promote text-to-911 and improve wireless location accuracy. I wish to also commend Chairman Wheeler for identifying steps Congress can take to help states facilitate the deployment of Next Generation 911 services.

With today's Notice of Proposed Rulemaking, we are taking strides to improve the usefulness of yet another important public safety tool – the Wireless Emergency Alert System or WEA for short. Our federal government has been working to deploy this public-private partnership for several years. Back in 2005, the Department of Homeland Security established the National Consortium for the Study of Terrorism and Responses to Terrorism, or START, and one of START's top priorities is a research and development program that would drive wider use of wireless alerts. Last fall, our advisory committee, CSRIC, worked with START to develop recommendations for the Commission to consider. This item turns those recommendations into rule proposals that fall into three key areas.

The first, is to enhance the content of WEA messages, by allowing them to be longer than 90 characters and more accessible to all communities. We ask whether we should allow these messages to contain phone numbers, URLs, multimedia, and multilingual content. The item also properly acknowledges MMTC's advocacy in highlighting the importance of providing emergency alerts in languages other than English.

Second is the improvement of the geo-targeting of Wireless Emergency Alerts. Right now, our rules prevent providers from transmitting WEA messages to areas larger than county level. We want WEA alerts to be much more localized so messages only reach the actual people who are at risk. Otherwise, those who repeatedly get alerts that may not be relevant for them may one day actually ignore alerts that directly impact their health and safety. So we ask whether we should limit WEA alerts, to finer geospatial areas such as geocodes, circles, or polygons.

Third is the facilitation of local WEA system testing. Proficiency building exercises are key to successful emergency management programs. We seek comment on whether any new or revised technical standards or processes, would be necessary to facilitate state and local testing.

In sum, this Notice puts our country on a path to improve the effectiveness of the WEA system for public safety officials and the citizens they serve. I thank Admiral Simpson, and the dedicated staff of the Public Safety Homeland Security Bureau, for their good work on this Notice, and for the presentation this morning.

STATEMENT OF
COMMISIONER JESSICA ROSENWORCEL

Re: *Improving Wireless Emergency Alerts and Community-Initiated Alerting*, PS Docket No. 15-91.

Just last week we had a cruel reminder that when the unthinkable occurs our security so often depends on connectivity. While the threats we face are new, there is nothing novel about how we rely on communications to help keep us safe.

For decades in this country the iconic beeps of the Emergency Broadcast System kept us informed and aware of local hazards and emergencies. Over time, this morphed into the Emergency Alert System, which can be used to address national, regional, and community crises. Nearly a decade ago, in the Warning Alert and Response Network Act, Congress extended these efforts beyond the television screen to the screens on our mobile devices—and set the stage for a new class of emergency notification: Wireless Emergency Alerts.

This made good sense when this law was passed—but it makes even better sense today. After all, we now have more mobile phones in this country than people. They are in our pockets and purses; they are by our bedsides at night; they are where we download and deposit every detail of our digital lives. We use these devices to help keep us informed, aware, and safe.

So the policies we have in place to support Wireless Emergency Alerts deserve an update. They need to be refreshed to reflect our reliance on mobile devices and their unique ability to keep us informed when disaster strikes. This rulemaking does just that. It proposes more information in Wireless Emergency Alert messages and more targeted geographical delivery of those messages. In addition, it recommends expanded testing opportunities for state and local public safety authorities.

This rulemaking is real progress. But I also hope progress continues on other fronts. Because we can strengthen our security even further by having active FM chips in our smartphones. There are market developments right now that are making these chips more available—and we should encourage these industry discussions to continue.

While technology changes, the power of communications to support our security is enduring. What is also unbroken is our resolve in the face of new threats—and our need to always update our communications policies to help keep us safe.

STATEMENT OF
COMMISSIONER AJIT PAI

Re: *Improving Wireless Emergency Alerts and Community-Initiated Alerting*, PS Docket No. 15-91.

The first AMBER alert went out over the Wireless Emergency Alert (WEA) system on the afternoon of February 20, 2013, in Minneapolis, Minnesota. An eight-month old boy, Carlos Orozco, had been abducted. People across the Twin Cities responded immediately. One person was at home playing a video game when his phone suddenly vibrated and played the WEA attention tone for the first time. It certainly made him take notice. He said the sudden noise "scared the [expletive] out of me. But it worked. I got up and looked outside." Others responded too, and one teenager who received the alert spotted the suspect. As a result, police caught the kidnapper, rescued the boy, and returned him safely to his family.

Whether it's a missing child, severe weather, or terrorist attack, Americans need immediate access to emergency information. The WEA system is one tool that lets consumers do just that. So I am pleased to support today's *Notice of Proposed Rulemaking*, which seeks public input on how we can make the system even more effective for those who choose to use it.

I find three aspects of the *Notice* particularly deserving of praise. First, we're examining ways for alert originators to target their information to narrower and more accurate geographic locations. Second, we're looking into ideas that could help consumers further customize the types of alerts they receive. Third, we're considering expanding the content that can be included in a WEA message, such as phone numbers and links to websites—in short, information that can be a lifeline in a moment of need. Indeed, the National Center for Missing and Exploited Children reports that it can be very difficult to fit critical details into a WEA message given some of the constraints in our current rules, so I agree that we need to take a look at updating them.

STATEMENT OF
COMMISSIONER MICHAEL O'RIELLY

Re: Improving Wireless Emergency Alerts and Community-Initiated Alerting, PS Docket No. 15-91

Generally, I don't have too many immediate issues with this Notice of Proposed Rulemaking, which is designed to improve the current Wireless Emergency Alerts. In certain circumstances, these simple, timely notifications can be critical or even lifesaving to those who receive them. On the other hand, too many notifications or ill-timed ones can promote consumer distrust and make the overall system less viable.

Appropriately, the item initiates debate and asks questions on a couple of possible changes to the current mechanisms. In doing so, we need to keep in mind that there is a delicate balance between the obligations asked of participating wireless providers and their willingness to remain part of the voluntary system. It would be extremely counterproductive if any proposed changes led to a decrease in the number of participating wireless providers. Our first priority should be to do no harm to a system that seems to be working reasonably well as is. Could it work better? Maybe. Could the Commission screw it up through inappropriate tweaks or wholesale changes? Definitely.

I appreciate the Chairman and the staff for accommodating a number of my concerns with the text originally circulated. There remains a couple of areas that are potentially troubling, such as the new testing regime and reporting requirements, mandatory opt-out options, and congestion-causing URLs and multimedia alerts. I am hopeful that the comment process will sufficiently alleviate my concerns about these ideas. If not, we will have to dispense with them before I could support any final order in this matter.